DOCUMENT RESUME

ED 201 453	RC 012 681

AUTHOR	Jones, Earl
TITLE	Social Attitudes of South Texas Primary Students.
INSTITUTION	D.C. Development Associates, San Antonio, Tex.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	Nov 76
GRANT	OEC-0-72-5309
NOTE	141p.
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	Academic Achievement; *Bilingual Education; Educational Change; *Federal Programs; Language Attitudes; Learning Processes; *Mexican American Education; Mexican Americans; Multicultural Education; Primary Education; Program Evaluation; Self Concept; *Social Attitudes; *Student Attitudes
IDENTIFIERS	*Edgewood Independent School District TX; *Experimental Schools Program; Texas (San Antonio)

ABSTRACT

A five-year program, part of the Experimental Schools Program in the Edgewood Independent School District, in San Antonio, Texas, was designed to improve the school performance of its predominantly bilingual Mexican American primary grade students by improving the attitudes of beginning students. Program changes to reverse students' anticipated low self-concept and negative attitudes included increasing the proportion of Mexican American teachers, taking students' learning characteristics into account, utilizing Spanish in instruction and classroom management, and utilizing Mexican American cultural curricula. The Purdue Social Attitude Scales for Primary Children, Experimental Edition II, in English and Spanish, was used for a one-year study of the program in the experimental schools and in comparison schools. The anticipated negative attitudes were not reflected in the students' test scores, and those of the experimental and comparison students were revealed as being usually alike, with both groups showing about equal gains across the test-year period. No discernable effect of the experimental program was found, and the likelihood of a language bias existing was not upheld by the research. (Author/JD)

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D. C. DEVELOPMENT ASSOCIATES, INC.
MANAGEMENT AND GOVERNMENTAL CONSULTANTS
MILAM BUILDING · SUITE 1400
SAN ANTONIO, TEXAS 78205
512/224-2319

MAY 1981
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SOCIAL ATTITUDES OF SOUTH TEXAS PRIMARY STUDENTS

by

Dr. Earl Jones

Dr. Robert A. Cervantes, Director

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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November 1976
San Antonio, Texas

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DENVER—180 COOK STREET, SUITE 207, DENVER, COLORADO 80206 • 303/321-2272
HOUSTON — 3220 LOUISIANA, SUITE 203, HOUSTON, TEXAS 77006 • 713/522-2254
LOS ANGELES—2140 WEST OLYMPIC BLVD., SUITE 534, LOS ANGELES, CALIFORNIA 90006 • 213/487-5740

ACKNOWLEDGMENT

The author appreciates the technical editing suggestions of:

Dr. Helen Bernal, Our Lady of the Lake University
Dr. Barry Thompson, East Texas State University
Dr. Victor G. Cicirelli, Purdue University
Mr. David Mack, National Institute of Education
Dr. Robert A. Cervantes, Development Associates

and Dr. Milton Goldsamt of the Washington, DC, staff of Development Associates.

The use of the instrument, data from Indiana, and continuous guidance during the course of the investigation by Dr. Victor G. Cicirelli are gratefully acknowledged. Data provided by the several other South Texas school district authorities and Antioch College (Juarez Lincoln) graduate students are deeply appreciated.

Special thanks, too, go to Marietta Rodriguez for her assistance in data coding and to Jayne Wieding for her preparation of the report.

* * * *

The research reported herein was supported by grant OEC-0-72-5309 from the National Institute of Education, Experimental Schools Program, of the US Department of Health, Education, and Welfare. The opinions expressed and the conclusions drawn do not necessarily reflect the position nor policy of the National Institute of Education and no official endorsement should be inferred.

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ABSTRACT

One of the National Institute of Education's urban experimental schools sites was the Edgewood School Plan in San Antonio, Texas. Its predominantly Mexican American student body was served in a locally developed and administered program designed to improve their affective domain, which in turn was expected to enhance their academic achievement. The program's basic document reflected the findings in much of the literature: Mexican American students begin school with negative attitudes and these worsen with exposure to education.

Development Associates, contracted to do the external evaluation of the program, keyed its research to the specific guidelines of the district's documents and studied the attitudes of the students, as well as other factors such as academic achievement, over the first four years of the five that were funded. The students were primarily bilingual, English and Spanish, and the experimental program was concerned that language bias not interfere in the classes or the testing.

The Purdue Social Attitude Scales for Primary Children, Experimental Edition II, was chosen for the attitude study in grades K-3 in the Edgewood School Plan and in the comparison schools. A parallel Spanish version was produced and investigated. It was found to have high reliability and strong validity. The samples were - 1975: English 1620, Spanish 570; 1976: English 711, Spanish 407 - in a one year longitudinal study. These were drawn from the experimental schools and two groups of comparison schools, others from the same district and some from other small town districts in South Texas.

The Edgewood comparison school means were generally higher in English than the experimental but not always so. Both were significantly higher than the small town schools. In Spanish the two Edgewood groups scored alike and significantly higher than the small town schools. Some differences were found among the scores of Mexican Americans, Blacks, Anglos, and Orientals in English but because of the great variation in sample sizes, these results were tenuous. The ethnic groups did not score differently in Spanish. Mexican Americans' scores varied significantly across schools, the other ethnic groups' scores did not. Sex was not a factor in any of the analyses. Students in kindergarten scored highest, followed by third, second, first. These differences generally remained when a subsample of the same students tested in 1975 were retested in 1976.

While the scale was not negative-positive polarized, the "very sad" to "very happy" graduated scale could infer such interpretation. No mean would have fallen below the middle point in the scale and most means would have approximated "happy," when calculated by groups of schools, schools, grades, or ethnic groups. This was true for either the English or Spanish version

scores. Four subtests made up the total score: peers, school, home, and community. The pattern was for peers to have the highest score and declining slightly through school, home, and community. The significant differences followed the patterns of the total scores.

The first, second, and third grade subtest and total scores were compared with data from Gary, Indiana, administrations; those for first, third, and all students were not statistically different; the Indiana second grade was higher than the Texas second. Texas and Indiana Blacks scored alike; Texas and Indiana Anglos did also. The Indiana data did not report Mexican Americans but since their scores were essentially like the other two groups, no important difference was found.

The experimental schools funding document had contended that their Mexican American children started school with a negative attitude and that the condition became worse with more time in school. However:

1. The Edgewood kindergarten students in the sample started school with positive attitudes, at or above the norm stanine of 5.
2. Those same kindergarten children, one year later in first grade, had numerically higher mean raw scores and at the same or next higher stanine.
3. Although there was a significantly higher score for kindergarten than first grade in 1975, both were at stanine 5 and the 1975 first graders raised their scores in 1976, as did all grades.

Neither of the two program contentions were upheld from the data collected in this study.

The experimental plan proposed to improve the students' attitudes through several programmatic interventions. However:

1. The scores of the experimental and same district comparison students were usually alike; in a few cases, the comparison students were higher.
2. The experimental students showed gains in scores over the one year period; the comparison showed about equal gains across the year also.

No discernable effect of the experimental program was found from the research data. Further, the likelihood of language bias existing, when applied to the sampled children as a whole, was not upheld from the research. Bilingual children scored about alike in English and Spanish in all grades except kindergarten, where the students scored higher in English, and in the small town schools where all grades scored higher in English.

The results lead to the conclusion that educators need concrete data from valid instruments before they ascribe some negative affective characteristic to Mexican American students and before they build a program based on such characteristics. If Mexican Americans generally are like the students in this study, treating them en masse as negative would be a serious programmatic error.

CHAPTER I: SETTING OF THE STUDY

In 1970, a research and development program called the Experimental Schools Program was established in the Office of Education of the Department of Health, Education, and Welfare. In 1972, the program was transferred to the newly created National Institute of Education. Each pilot program selected for funding addressed particular student and school district needs. Generally these efforts were directed toward long range planning and the programs were initiated by local authorities. (40)

The Edgewood School Plan

One of the urban districts chosen for the Experimental Schools Program was the Edgewood Independent School District in the city of San Antonio, Bexar County, in South Texas. Six schools (one secondary, one middle, and four elementary) of the twenty-six in the district were designated to participate. (43) These six approximated the general district population: 90% Mexican American, 6% Black, and 4% other, including Anglos. The income level of the district was low with manual labor and clerical making up the majority of the occupations. The tax base was correspondingly low and the district faced many financial problems. (62)

The experimental program, funded by the National Institute of Education, was entitled the Edgewood School Plan and was begun in the summer of 1972. Its guiding document was the Final Plan: Experimental Schools Project (43), dated May 1972, based primarily on the "theory of incompatibilities." In summary, this theory stated that the school system had been developed for "White, English speaking, Anglo Saxon, middle class oriented children," and the staff, materials, and instructional methods were not suited to the Mexican American population. The program expected to achieve academic improvement through changes designed to utilize the pupils' language, socioeconomic, and cultural characteristics as the basis for all instruction.

Evaluation Research

The National Institute of Education's Experimental Schools Program had two major goals:

1. Assist districts in making needed educational changes.
2. Conduct long range research on the programs in order to provide practitioners and researchers with new information on educational changes.

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To accomplish this latter goal, the National Institute of Education created two evaluation units: one, internal, to provide input for program development, and a second, external, to furnish the Institute with data on the conduct of the pilot activities and, hopefully, generalizable data for professionals in education. The external evaluation effort was contracted with Development Associates, a private firm in Washington, DC, which established a San Antonio office to conduct the work in fall 1972. (40)

Development Associates formulated a long range design to study the Edgewood School Plan, based primarily on the Final Plan document and supplemented by dimensions specified in the early experimental school program proposals. Additionally, other research was undertaken at various stages during the project as program activities dictated.

To provide comparative data, four (one secondary, one middle, two elementary) similar, non-treatment schools were selected from the district and were studied simultaneously. Thus it was expected that changes accruing from other influences could be isolated from those induced by the experimental treatments.

The major focus was on studying the effects of the structure, staff, materials, and instructional methods' impact on student achievement, measured via a standardized test. Baseline data on achievement, the affective domain (self concept, motivation, and attitudes), school and classroom environments, instructional materials, and teaching techniques were collected. Followup research was then conducted during the first four years of the program. Interim reports and special studies publications were provided. (22, 40)

Studies of Affect in the Experimental Program

The Final Plan noted that the district's Mexican American students began school with low self concept and negative attitudes and that these worsened as the students attended school (43, p. 16). The proposed program changes were designed to reverse this trend. These included increasing the proportion of Mexican American teachers, taking the students' learning characteristics into account, utilizing Spanish in instruction and classroom management, and including local and Mexican American materials in the curricula.

Development Associates conducted longitudinal research on these factors, establishing first the school entry status of each and then studying any changes occurring in pupils in the experimental treatment classes. Instrumentation was selected by the staff in consultation with its technical panel of outside experts and the National Institute of Education.

The Self-Concept and Motivation Inventory, SCAMIn, (81) was used to measure these two affective domain characteristics in kindergarten through twelfth grade. Generally the self concept study found the student mean for kindergarten at about the national norm and all other grades' means resulted at norm or one stanine above. The motivation mean, on the other hand, began below norm and remained so except for grade five which was at norm. (22) No significant differences were found between the treatment and comparison student means. Later, a pilot study of fall-spring kindergarten administrations and more detailed analysis of third grade was conducted. Kindergarten children increased significantly in self concept from fall to spring and third graders increased their scores over second grade. (99)

The Student Behavior Description Questionnaire (SBDQ) was administered to measure attitudes (35). Although originally chosen for all grades, recent reports suggested it was appropriate for grades four through twelve only. Two kinds of data were provided from this instrument. The first gave T-scores on three constructs (achievement, affiliation, inclusion) plus twelve subtest scores. The spring 1973 means for both the treatment and comparison students were near the norms for the sample used in the validation of the instrument. No significant differences were found. The second kind of data provided was the numbers of student types defined in the SBDQ constructs. The proportion in the baseline Edgewood study approximated those for the norming populations. Some differences between treatment and comparison students, and between the 1973 and 1974 administrations, were found. However, they were not uniformly negative nor positive and judgment on program impact was reserved until additional years' data could be analyzed. (22)

The lack of kindergarten through third grade attitude data, unavailable through the SBDQ, was considered serious and a study of possible instruments was undertaken. While several were examined, difficulty of administration, erratic results, and scarcity of norming data excluded most of them. Finally, in 1974, the Purdue Social Attitude Scales (PSAS) for Primary Children was selected. (32) While it, too, presented some deficiencies, the meticulous research conducted on it, the creditable results of the first experimental edition, and the ease of administration and scoring caused Development Associates, its technical panel, and the National Institute of Education to prefer that instrument, by then in its second experimental edition. (25)

Concerned with the possibility of language bias in the results, a Spanish version was produced by Development Associates. Both the English and Spanish versions were utilized in the research. An instrumentation study was conducted on the two. (67)

Two additional, smaller studies in the affective domain were conducted during the 1974-1975 academic year. The first of these investigated values in the treatment middle school. It found mostly middle class orientations for low and middle income students with relatively conservative views toward teachers, teaching, discipline, aspirations, and school generally. Teachers tended to be somewhat more liberal in their opinions but still usually approximated those of the students. (22,84)

The second special study utilized the Nowicki-Strickland Abbreviated Elementary and Secondary Locus of Control Scales (86) with a small sample of third, seventh, and eighth grade Mexican American students. Externally locus oriented seventh and eighth grade students scored significantly higher on the CTBS/Q (38) achievement subtests of reading and arithmetic and on the total battery. (19) However, a private study of third, fourth, and fifth grade Mexican American students, using locus, self concept, and achievement found that low self concept, internally locus oriented girls achieved higher than any other group. Other minor differences were encountered but the author concluded that neither locus of control nor self concept was predictive of academic success. (20) Similar results had been reported in other recent research literature.

The common threads throughout the preliminary Development Associates studies on the affective domain were:

1. There were few or no significant differences between the Edgewood School Plan students and those researched elsewhere with the instruments on self concept, attitudes, locus of control, and values.
2. Edgewood School Plan students were generally lower in motivation than the national norm.
3. There were no appreciable differences between the treatment and comparison students during the first two years of the experimental program.

These findings generally coincided with the recently published research reports (35, 47, 48, 57, 83) but contradicted the theory of incompatibilities (17, 43, 107) and some other articles (39, 60, 95, 113). They appeared to be providing much needed substantive information on Mexican American pupils. The obvious gap in the research was the study of K-3 attitudes. Further investigation, via the Purdue Social Attitude Scales, was designed and conducted to fill this need.

CHAPTER II: THE ATTITUDE LITERATURE

Interest in the affective domain, both from research and policy considerations, has had a long history. During this century, with the growth of the social science methodologies, the attention has been cyclical. It showed considerable strength toward the end of the First World War, a decline, a considerable blossoming in the 1930s, another decline, renewed vigor in the 1950s and early 1960s, and now apparently of lesser intensity again from the research standpoint but still used a great deal in intervention programs. (79)

Theoretical Affective Constructs

The affective field has experienced considerable variation in terminology, with concomitant differences in direction of study and application. The principal terms employed include: affect (57), affective domain (52), attitudes (110), beliefs (34), locus of control (86), motivation (77), self concept (81), self esteem (93), self identification (66), self perception (72), values (10). While this is neither an exhaustive list of the terms nor of those who have used them, the variability is obvious. In reality, no two of these terms are exactly the same nor is any one exclusive of all the others.

Within this plethora, however, attitude has benefitted from generally accepted research definition parameters, typified in that of Allport (3):

> A mental and neural state of readiness to respond, organized through experiences, exerting a directive and/or dynamic influence on behavior.

Fishbein (50, 51) and Summers (106), while wording their definitions somewhat differently, concurred with Allport on the content. The only groups holding substantial disagreements with this definition are those who believe genetics play a larger role than environment in behavior, such as the Soviets (8), and those with misgivings because of the concept of will in religion, described eloquently by Palmes (89). Program designers have usually simplified the definition for training purposes (65):

> The propensity to think, feel, and act in similar ways in similar circumstances.

Both the Allport and the program definitions share certain assumptions:

1. Attitudes are formed through past experiences.

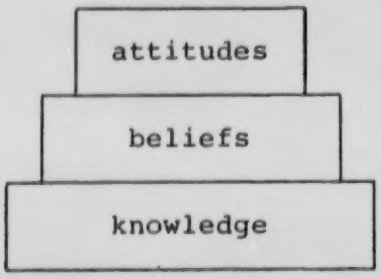
2. Emotion during, as well as the physicality of the experiences, gives direction and strength to attitudes.
3. Once formed, attitudes are relatively stable.
4. Attitudes can be measured, and if properly measured, can predict certain behaviors.
5. Attitudes can be changed in direction or strength by the addition of new experiences.

It must be noted, however, that not all proponents of the definitions share equally all five of the assumptions.

The interactions among the several terms are topics of controversy. Allport (3), for example, saw

opinion→attitude→interest→value

on a continuum from left to right. Thurstone (109), on the other hand, saw the structure as resembling building blocks:



with opinions relegated to tentative expressions of attitude, and interests as searching mechanisms in the formulation stage of beliefs and/or knowledge. Others saw values coming between beliefs and attitudes (11, 58), supplanting beliefs (69), or growing from the process and thus forming a higher dimension (49, 74).

Attitudes are normally seen as outward in direction, that is, toward specific or a class of objects, persons, or issues although mediated by self (37). The terms that include self are usually reflexive (117) and indicate attitude toward self: self concept, self esteem, self identification, self perception. They include knowledge about self and the valuations of others about self. Thus they are mostly inward in direction and are often considered Freudian in orientation. (77, 87) Locus of control and its generative theories of power-anomie, are interactive between self and others but are generally characterized by either/or judgments and are sometimes seen as immutable. (92)

In summary, both theorists and researchers have employed a wide variety of terms, and partially separate constructs for them, within the affective domain. Among these, both the Allport and program definitions are fairly uniform and have shared similar assumptions on formation, change, and measurement. The interactions between attitudes and other affective elements or constructs have been subject to some controversy and this has frequently led to different research and programmatic interpretation and application.

Research into the Correlates of Achievement

A bewildering set of variables has been used in the affect-cognition research, often with conflicting results. The inclusion of intelligence quotients, standardized test scores, and grades as both dependent and independent variables has further complicated the issue. (9) Adkins (2), in her general review of motivation to achieve in school, delineated socioeconomic level, ethnicity, sex, instructional program, and individual affect as the most important elements for study.

Socioeconomic status has produced conflicting results but generally low income, low affect, and low achievement have been found to be significantly related. (27, 39, 47, 71) The contrary is also reported. (25, 57, 91) Ethnicity, often not separated from socioeconomic level, has been reported with Blacks and Mexican Americans lower in affect and achievement than their Anglo counterparts. (6, 48, 96)

Sex differences usually have been found when grades were used as the achievement variable. (57, 93, 94, 96) Cervantes (20) found no overall sex difference on standardized achievement scores but did find girls with low self concept and internal locus of control to score significantly higher than boys. Simon & Simon (101) reanalyzed a number of studies and concluded that no important sex differences existed. Language proficiency, closely related to ethnicity, was found higher in Mexican American girls and related to academic attainment in a Texas study (91). Girls, regardless of ethnicity, had higher mathematics scores than boys in another investigation (76).

Effects of instructional programs on attitudes and achievement, and their combination, are varied in the literature. Where there are negative findings, authors have tended to blame middle class Anglo structure and orientation on the failures of low socioeconomic and minority children. (7, 43, 60, 107)

Programmatic strategies appeared to have been associated with significant increases in affect and/or achievement in some cases. (53, 98) Bilingual/bicultural education has been reported by some to increase both cognitive and affective growth. (59, 61) Most of the general program effect reviews, however, have found that programs change neither of these variables consistently, or have found the evidence to be inconclusive. (15, 22, 56, 90, 115)

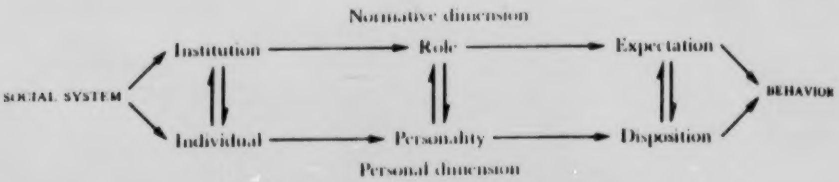
Some found personality characteristics have been classified as negative and to produce negative results on academic attainment (6, 35, 39, 47, 48, 72, 111), positive results (1, 2, 9, 71, 93, 98) or tenuous and/or inconclusive results (19, 20, 21, 29, 36, 46, 64, 68, 101). While not all of these used the same affective measure, had the same size of sample, nor interpreted the results in the same way, the present known status of most affective variables' impact on achievement is at least questionable. Certainly a great deal more research into instrumentation, administration, and analysis is needed.

The Role of Affect in the Edgewood School Plan

The experimental program, the Edgewood School Plan, saw changes in the affective domain as of primary importance in its funding document, its 1972 *Final Plan* (43), and reaffirmed this stand in its 1974 *Philosophy of Communications Skills* (45) and the 1975 *Personalizing Instruction Model* (44), emphasizing student self concept and attitudes. In calling for a system, materials, teachers, and administrators ethnically and empathetically compatible with the students, the founders almost exactly echoed the words of Tannenbaum (107) in a 1954 article in *Progressive Education*.

Although the student unrest of the 1960s had stimulated increased interest in general affective factors and student academic development, the idea was by no means new. Two programs, begun in the second decade of this century, the US Agricultural Cooperative Extension Service (54, 65) and Vocational Agricultural Education (104), both built explicit and substantial behavior modification efforts into their programs. Utilizing leadership development as both a goal and vehicle, these giant, successful programs were credited with changing rural attitudes to gain greater agricultural production and improved farm family living.

Placing affective change programs in theoretical context, Getzels (56), proposed the following schematum in explaining the principles of social psychology in education:



He noted, however, that his review of the literature left the question of cause-effect inconclusive when academic attainment is sought from affective change programs. Wheat (116), among many educators, had earlier reviewed the studies and concluded that affective programs have no place in teaching mathematics.

Fein (49) and McClelland et al (77) reviewed the literature, too, but came to the opposite conclusion: the major need in schools was a solid affective change program. Despite the party line, "genetics over environment," most of the official 1971 education program guidelines for Russia concerned instilling certain attitudes about the state, humanity, work, and science (12). Proposed improvement programs for minorities in the US have agreed. The Banks & Grambs (7) enunciation for Blacks, the Foerster (53) plea for better education of Texas Chicanos, the much cited Ramirez (95) pronouncement for Mexican Americans are well known examples of this approach. Books on teaching specific subjects also include approaches to: language arts (82), history (102), social studies (66), mathematics (76), science (10).

Early childhood education, relatively new in this country, was modeled almost entirely on the theoretical constructs developed by Piaget (92). Landreth (73), in her landmark publication on kindergarten, gave explicit instructions for modeling behavior. Kost's plan (70), the Tucson Early Education Model (61), was more affective than cognitive in design. While the Texas programs tend usually to emphasize academic readiness more than these cited models, they still intentionally focus on affective development.

Understandably, then, the Edgewood School Plan formulated techniques and strategies for improving affect in its pupils. It set about to find empathetic teachers, recruited more Mexican American staff, wrote some materials in the first year that included Mexican Americans in them, and generally set out to make the classroom environment more approving of students in order to help them form positive self concepts and improved attitudes toward themselves and school.

Development Associates' affective research, too, was an obviously important dimension in its external evaluation program. Self concept, motivation, and general classroom environment were measured in grades K-12 from early in the investigation effort. Attitudes in grades 4-12 were deemed to be adequately monitored. The present K-3 research on attitudes, then, was a necessary addition to the overall evaluation effort.

Few instruments are available that measure the attitudes of primary children toward school. A survey showed the PSAS to have the most extensive work reported on its development, including studies into the reliability and validity of the first experimental edition and subsequent revision from the data gathered.

Furthermore, the instrument author's definition of attitude was consonant with the experimental program rationale as expressed in its Final Plan (43). In a letter to Development Associates, Dr. Victor G. Cicirelli explained the meaning of social attitude as used to construct the PSAS as:

> ...a learned predisposition to think, feel, judge, or behave in a consistent manner toward an object, person, or a limited class of objects, persons, or situations.

He also stated that, in certain cases, the four subscales might have greater diagnostic powers than an overall attitude score since the items probe the child's feelings about "significant individuals with whom the child comes into contact." These, when aggregated, could give useful information about his perceptions of important elements of his environment and indications of where improvement should be effected. Because of these theoretical orientations, the five years of development on the instrument, and its general applicability to the overall evaluation program, the Purdue Social Attitude Scales for Primary Children was chosen for the research.

CHAPTER III: RESEARCH INSTRUMENTATION, DESIGN, AND METHODOLOGY

The investigation, of necessity, undertook a series of tasks simultaneously. In cooperation with the author of the Purdue Social Attitude Scales for Primary Children, Experimental Version II, the instrument's reliability and validity were examined and reported earlier (64). A Spanish language version was prepared by the Development Associates staff and its reliability and validity were also studied. Both versions were administered to samples with some students tested on both during the spring of 1975 to serve in the attitude measurement research and to answer the basic questions:

1. What were the social attitudes of the K-3 students in the experimental schools?
2. Did these differ from those in the comparison schools?

Both versions were administered again in spring 1976 to provide answers to the questions:

3. Did the social attitudes of the experimental schools' children improve over time?
4. Did the social attitudes of the experimental schools' children improve more than those of the comparison children?
5. Did the students score differently on the Spanish version of the PSAS than the English version?

Since no large scale studies using the second edition of the Purdue had been reported, two other sets of data were incorporated to provide a basis for assessing the generalizability of the Edgewood measurement. Other South Texas schools, also containing a high proportion of Mexican Americans, were added for within ethnic group comparisons. During the conduct of the research, the Purdue group administered the PSAS in Gary, Indiana. Summary data were provided by Purdue and were utilized in this report to provide information on the appropriate status of the Edgewood students with those in another region.

The English Version of the Instrument

The present English version has undergone a series of modifications to improve its presentation, reliability, and validity. Beginning with the Meyerowitz Index of Self-Derogation (80) in 1961, Dr. Victor G. Cicirelli and his associates at Purdue University replaced and modified items to produce the Children's Attitudinal Range Indicator, first utilized to measure self concept in the Ohio Head Start program (115) in 1969. This edition was further refined into the Purdue Social Attitude Scales, Experimental Edition I (26), for the follow-up study of the same program in 1972.

After intensive studies into the instrument's reliability and validity, that version was again revised and entitled

Purdue Social Attitude Scales for Primary Children, Experimental Edition II (32). In 1974, with the author's permission, Development Associates refined the wording and drawings and administered the instrument to the present study samples.

Experimental Edition I and Its Revisions

This edition contained 32 items divided equally among four subtests entitled peer, school, home, and society (later changed to community). Item analyses for congruence between reasons for the children's responses to and the subjective intent of the item, item clarity, item discrimination, and item response frequencies to each alternative were calculated and appropriate changes were made.

The intercorrelations among the subscores were produced. Some overlap was found among them but they were judged not to be total duplications of each other. The subscores were retained because they apparently measured different aspects of the construct tapped by the PSAS and could provide useful diagnostic information.

The internal consistency reliability coefficients (Cronbach's Alpha, were reported by Cicirelli for the sample as: home .485, school .464, society .370, peer .580, and total .792. The reliability coefficients were considered low for the sample but in-depth interviews conducted during the administration was thought to have inadvertently affected the children's responses. The mean scores of all three grades tested (first, second, third) showed positive attitudes on the subtests and total instrument although the home and society subscales decreased as grade level increased. (32, pp. 25-28) Item revision included the removal of some postural or gestural indicators in the drawings, word simplification, and some frames of reference.

Description of Experimental Edition II

The second experimental edition of the instrument, then, contained 40 items in a story-picture format (Appendix A), in which three frames and the accompanying explanation established a situation to which each child reacted. That reaction was indicated by the child in the fourth frame, where he chose one of five faces. The expectation was that each child would identify with the character and mark his own feelings. The faces appeared as very happy, somewhat happy, neither happy nor sad, somewhat sad, and very sad; these were scored respectively, 5 to 1. The pictures were stylized, cartoon type drawings.

The 40 items were divided equally into four subtests: peer, school, home, and community. The subtest items were spaced alternately through the booklet to reduce the probability of vicarious answering. The least possible score for any subtest, provided a student answered every item, was 10 and the maximum was 50. The sum of the subtests could then range from 40 to 200.

The peer subtest items pose situations of interaction among children in school, on the playground, and in the neighborhood. Five of the ten items contain references to play; the remaining imply some type of sharing. The school items are centered directly in the school. Five set up teacher-student interaction; one involves going to the office; the remaining four are to elicit general feelings about school. Two of the home subtest items are stated in general terms; the other seven specify interaction with one or both parents, or with siblings. Of the ten community situations, five describe possible interaction with neighbors; one refers generally to the neighborhood; the other four specify a repairman, fireman, policeman, and store owner. The children posed as subjects of the items are equally divided between boys and girls.

The Spanish Version of the Instrument

The Spanish language version was prepared jointly by the author of this report and Dr. Robert A. Cervantes. (67) It was then reviewed by some Development Associates staff, bilingual teachers, aides, Edgewood School Plan professionals, and members of the community. Appropriate revisions were made.

The trial instrument was pretested with sixteen bilingual students (8 boys and 8 girls) at each grade level (total N=64). Following the administrations, indepth individual interviews were conducted with each student. Four word changes were then made to increase students' comprehension of the items.

The final Spanish version is almost exactly parallel to the English version. Common Spanish names were substituted for those used in English. No adequate Spanish word for the generic term "repairman" (item C-3 in Appendix A) was encountered. After consultation with many bilingual adults and students, the specific term "plomero" (plumber) was chosen.

After modifications, completed sets were sent to the original author and to the National Institute of Education for review. The instrument was then printed and administrator instructions prepared.

The South Texas Instrumentation Study

Reliability and validity studies of the English and Spanish versions of the Purdue Social Attitude Scales for Primary Children, Experimental Edition II, were conducted in South Texas in spring 1975. The large samples (English=1620, Spanish=570) included mostly Mexican Americans but some Anglos, Blacks, and Orientals in a test-retest design on each language. (64)

Congruency of item response for students repeating the administrations was very high within languages (82 to 94% for English; 78 to 92% for Spanish) and fairly high between languages

(English-Spanish 52-78%). Response frequencies were similar within and between languages. Item discrimination between the one-third scoring lowest and the one-third highest on the subtest and total scores was always in the appropriate direction and the contrasted item mean scores were significantly different. Item Pearson correlations were moderate (.35 to .55) with subtest scores, low to moderate with total scores (.27 to .47).

Correlations among subtests were upper moderate (.56 to .63), and high for subtest to total scores (.82 to .84). Convergent validity was thus judged high. English-Spanish intercorrelations were in the lower high range (.78 to .79), indicating viability of the Spanish version.

Correlations between the English and Spanish versions of the UCLA Center for the Study of Education's School Attitude Questionnaire, which taps similar constructs, were high (.72 to .91) for kindergarten when compared to the Purdue school subtest scores, adding validity support to the instrument. Correlations for first and second grades were negligible (.11) with the motivation scores of the Self-Concept and Motivation Inventory, low (.23) with the self concept scores of the latter instrument.* Correlations of the PSAS with the language subtest scores of the TOBE and CTBS/Q were low (.37). Correlations of the PSAS with teacher assigned grades were high (.85).** Attitude, self concept, and motivation are partially separate constructs. Item examination, however, showed many content similarities between the Purdue and the SCAMIn. Further research on the differences was urged.

Teachers and/or aides read the captions to groups of about ten students as they followed the pictures in the booklet. The teachers reported that the students "enjoyed" the instrument.

A tentative stanine chart was produced based on the major English sample of 1620 students and comparisons with the Gary, Indiana, sample. Converting the scores to stanines did not change the relative position of the groups, schools, or grades.

Recommendations to practitioners included confidence in the instrument for grades K-3, both in reliability and validity, in measuring the subtest constructs of peer, school, home, and community attitudes and the instrument's overall attitude concept. The Spanish version gave similar results to those found in English and the conclusion was that it is a useful instrument for those children fluent in that language and deficient in English. Since the Spanish version was made specifically

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*A study of the SCAMIn, currently in preparation, found low, negligible and even some negative item to subtest and total score correlations in the motivation portion of that instrument. (63)

**Cervantes & Bernal (21) found similar relationships when studying some of these factors for South Texas vocabulary in that language, caution was urged in its utilization with other Spanish speaking groups until further research could be completed.

The Research Design

The general design for the present study was planned with entire classes drawn randomly by grade from three groups of schools: experimental, comparison, and other districts. This latter group was added to provide information on the comparability of the Edgewood findings in relation to other, primarily Mexican American, districts in South Texas. Testing by classroom was expected to equalize sex differences in the samples. It was recognized from the beginning that ethnic composition could not be balanced since Mexican Americans made up the majority of the schools in the study. Previous studies (22, 40, 99) had shown the experimental and comparison groups to be similar in ethnic composition, socioeconomic level, standardized test achievement, self concept, and motivation. The individual schools within these two groups, however, were not alike on the affective and cognitive variables, thus school was used as an element for analysis in the present study. The data from one school each in three other South Texas districts participating in the study, La Joya (55, 97), Benavides (24), and San Diego (46), indicated approximately the same composition with the exception that there were few or no Anglos, Blacks, or Orientals at the grades tested. These three districts each had an enrollment of about 2000 pupils and more than half of these came from the surrounding rural areas. The achievement scores showed all three samples to be higher than those in Edgewood. The mean achievement scores for the San Diego students were the highest, approximately at national norm. The per pupil expenditure for education was about the same for all three districts and similar to that of Edgewood. A fourth school, from the Alamo Heights district in San Antonio (68), also had higher standardized achievement test means, higher socioeconomic level, and fewer Mexican Americans than in Edgewood. The per pupil expenditure was about 20% higher in Alamo Heights than in Edgewood. Some of the schools participated only in 1975 or 1976 and in some cases administered only one language version.

Cross sectional and longitudinal designs were employed with each language version of the instrument. The dates of the four administrations were:

English: February 3-8, 1975
Spanish: March 4-9, 1975
English: February 2-4, 1976
Spanish: March 11-13, 1976

The scores from each administration were examined via five variables: group, school, grade, ethnicity, and sex. Each was potentially valuable for program implementation. Further, each could supply additional information on these subsamples and indicate areas for future research. Total sample and/or matched student administration samples were used as appropriate in the analysis.

The Samples

Three Edgewood experimental* and two comparison elementary schools participated in the first administration of the attitude instrumentation study. Nearly 96%, lacking only 36 students absent the entire week and 33 who did not complete all items in the test booklet, of the students enrolled in kindergarten through third grade were included (N=1620). While the samples were not evenly divided between experimental and comparison, they reflected a proportionate distribution of their schools. (Table 1)

Concern over generalization of the results to other Mexican Americans in South Texas led to using a third sample. A 50% sample of the classes was drawn randomly from one school each of the four other districts available for any of the administrations.

Table 1: Distribution of Students Tested by School and Instrument Administration

School	Eng 1975		Sp 1975		Eng 1976		Sp 1976	
	N	%	N	%	N	%	N	%
1	321	19.8	48	8.4	158	22.2	74	18.2
2	310	19.1	132	23.2	115	16.2	58	14.3
4	213	13.2	15	2.6	85	12.0	16	3.9
Total Experimental	844	52.1	195	34.2	358	50.4	148	36.4
5	326	20.1	121	21.2	65	9.1	57	14.0
6	311	19.2	109	19.2	84	11.8	40	9.8
Total Comparison	637	39.3	230	40.4	149	20.9	97	23.8
3	*		*		182	25.6	18	4.4
7	63	3.9	64	11.2	*		59	14.5
8	76	4.7	81	14.2	*		64	15.7
9	*		*		22	3.1	21	5.2
Total Other	139	8.6	145	25.4	204	28.7	162	39.8
Grand Total	1620	100.0	570	100.0	711	100.0	407	100.0

*Not included in testing program for that time period.

The grade distribution for the first English administration was similar among the four classes and, again, reflected the enrollment in each grade. (Table 2) The sexes were nearly equally divided: 50.6% males, 49.4% females. (Table 3)

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*One of the four experimental elementary schools selected was unavailable at any of the scheduled testing times. Other schools experienced conflicts for some of the administrations.

Mexican Americans comprised 87.5% of the sample; the remaining included small numbers of Anglos, Blacks, and Orientals. (Table 4) Almost all of these last three were in the experimental and comparison schools.

Table 2: Distribution of Students Tested by Grade and Instrument Administration

Grade*	Eng 1975		Sp 1975		Eng 1976		Sp 1976	
	N	%	N	%	N	%	N	%
Kindergarten	361	22.3	154	27.0	216	30.4	100	24.6
First	439	27.1	201	35.3	237	33.3	128	31.4
Second	432	26.7	215	37.3	174	24.5	90	22.1
Third	388	23.9	**		84	11.8	89	21.9
Total	1620	100.0	570	100.0	711	100.0	407	100.0

*Grade indicated was for 1975; each had progressed upward one grade in 1976.

**Not included in testing program for that time period.

A joint Development Associates/National Institute of Education (28) seminar reduced the scope of testing to within grade samples rather than entire enrollment. Furthermore, the Edgewood district modified the boundaries of the several schools to achieve more equitable ethnic balance. These factors, combined with problems encountered due to scheduling, changed the 1976 samples considerably. The percentages of the experimental school samples remained roughly equal to those for the 1975 English administration even though the numbers were greatly reduced. The comparison schools, however, could not participate in the same proportion and their percentages, compared to the total sample, were cut nearly in half. The other district schools, totally unavailable at the appropriate time for the 1976 English administration because of achievement testing, were substituted by two other schools for the generalization data. (Table 1)

Distribution by grades was also affected. The kindergarten children, who had now become first graders, and the first grade, now second grade, showed an increase in percentage. The 1975 second and third grades, third and fourth in 1976, accounted for lower proportions in the 1976 total. (Table 2) Since the sampling was by class, the gender distribution should have remained about the same. Females, however, outnumbered the males in this administration. (Table 3) Ethnic breakdown, too, was altered, with Mexican Americans making up only 61.3%, compared to 87.5% in 1975. The changing boundaries in the Edgewood schools, plus the addition of another San Antonio district school, caused the change. (Table 4)

Table 3: Distribution of Students Tested by Sex and Instrument Administration

Sex	Eng 1975		Sp 1975		Eng 1976		Sp 1976	
	N	%	N	%	N	%	N	%
Male	820	50.6	289	50.7	323	45.4	212	52.1
Female	800	49.4	281	49.3	394	54.6	195	47.9
Total	1620	100.0	570	100.0	711	100.0	407	100.0

The 1975 Spanish administration was planned for all students in the original English sample who were sufficiently fluent in Spanish to comprehend the items in the instrument. Classes in the experimental schools were divided into three language categories: English dominant, intervention Spanish (commonly called bilingual), and Spanish dominant. The intervention and Spanish dominant were selected for administration of the Spanish language version of the Purdue. The comparison schools were divided into "regular" and bilingual. The latter were used in this portion of the study.* All classes in the other districts' schools were bilingual. Teachers were allowed to exclude any pupil from any of these classes thought not to possess sufficient fluency in Spanish.

Table 4: Distribution of Students Tested by Ethnicity and Instrument Administration

Ethnicity	Eng 1975		Sp 1975		Eng 1976		Sp 1976	
	N	%	N	%	N	%	N	%
Mex. Amer.	1417	87.5	532	93.3	436	61.3	349	85.7
Anglo	108	6.7	18	3.2	122	17.2	25	6.1
Black	72	4.4	19	3.3	96	13.5	21	5.2
Oriental*	23	1.4	1	.2	57	8.0	12	3.0
Total	1620	100.0	570	100.0	711	100.0	407	100.0

*The influx of Vietnamese and Cambodian refugees accounted for most of the increase in 1976.

The numbers of students per school and grade approximated the students enrolled in the selected classes and were, of course, smaller than those for 1975 English. The proportions among schools also changed, reflecting the distribution of language fluency class distributions in the schools. (Table 1) Third grade was not available for Spanish administration in any school due to special activities occupying their time.

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*For a study of the ESP language dominance placement for instruction, see Cervantes & Saucedo (23).

The other grades' samples totalled 570. (Table 2) The sex distribution for 1975 Spanish remained almost identical to that of English. (Table 3) The Mexican American component of the Spanish language administration, of course, increased considerably, reaching 93.3% of the sample. Only a few Anglos and Blacks, and one Oriental, were sufficiently fluent to be included. (Table 4)

The 1976 Spanish samples in the experimental and comparison schools were altered due to the contracted sampling plan (28). Further, the experimental schools abandoned the language dominance placement into classes for the 1976 academic year and to maintain the repeated student measures designs in the sample in one experimental school had to be altered. All four other district schools were available for the 1976 Spanish testing, raising their proportion in the total sample for this administration. (Table 1)

The class distribution was altered somewhat from 1975 to 1976. Since the third grade was tested in English in 1975, and a sample of these same youngsters was retested in English as fourth graders in 1976, those same classes were tested in Spanish in 1976. This addition accounted for most of the grade modification that occurred. (Table 2)

The sex proportions (Table 3) returned to approximately those present in the 1975 samples with males slightly outnumbering females. The Mexican American component in the 1976 Spanish sample made up 85.7%, much nearer the 1975 division. (Table 4) The numbers of Anglos, Blacks, and Orientals in the 1976 sample increased, primarily because some of the students in these groups had participated in bilingual education and had increased their Spanish fluency sufficiently to comprehend the instrument in Spanish. Interaction with Spanish speakers on the playground and in the neighborhood play groups no doubt also contributed to the increase.

Summary data from 1975 Gary, Indiana, administrations by the Purdue University staff and associates were provided for comparison with the Texas results. The sample included: 105 first, 141 second, and 135 third graders. The sex composition was approximately equal. Blacks numbered 245, Anglos 136 in the 381 sample total. An examination of the summary data means provided insights into the distribution of the Texas findings.

Data Collection and Tabulation

Following the procedures of a number of attitude investigators (1, 4, 13, 52, 58, 79), the teachers and teacher aides administered the instruments in order to maintain, as much as possible, the normal classroom climate. In each case, instructor orientation sessions were conducted prior to the administration, with uniform guidelines set for the testing. The instruments were examined carefully and any doubts about procedure or wording were clarified.

Additionally, one of the Development Associates staff members was available during the administrations in case unforeseen problems should arise and to assure uniformity of presentation. Few difficulties arose; nearby noise level, unexpected interruptions, and the illness of one teacher were handled through postponement or change of location. The instructors reported and the supervisors observed that the children "liked the instrument." The picture-story presentation was pleasing to most students.

Those students who marked every item with the same response were eliminated since it would appear impossible for the student to "feel the same" in every situation presented. An occasional student left one or more items blank and these instruments were also removed. All of these losses were minor, accounting for less than 4% of any administration.

Each instrument was scored, checked, and the subscale and total scores calculated. The item, subscale, and total scores were transferred to Fortran sheets by experienced personnel. Identification numbers were affixed, along with the information from the other variables. Computer cards were then keypunched and verified at the 20% level. An edit run was used to clean the data card decks.

Data Analysis

Statistics were performed according to the demands of each analysis. These are indicated as each result is presented. Most were accomplished via the Statistical Package for the Social Sciences, Second Edition (85), at Trinity University in San Antonio, Texas. Analysis of variance and one way ANOVAs were used to examine the effects of the variables. Scheffe's post hoc tests assessed statistical significance between any combination of cell means.

Limitations of the Study

The present study would have benefitted from equal or nearly equal samples by group, school, grade, ethnicity, and sex. The reality of conducting research in the schools of South Texas, and probably in schools anywhere, precluded a classic experimental design and severe intervention in the conduct of the schools. The cell sizes in some cases, then, were insufficient for meaningful analysis. This posed considerable restraint on some of the statistical comparisons and substantially reduced the generalizability of some of the findings. Except where noted, therefore, these results must be confined to the samples in the study.

CHAPTER IV: THE ATTITUDE STUDY

The attitude study mean raw score data were analyzed cross sectionally (1975 and then 1976) and longitudinally (1975→1976) by language version (English and Spanish). The results of the two versions were then compared. Following, the raw scores were converted to stanines and comparisons were made utilizing the tentative stanine chart developed from the 1975 English administration. Additionally, comparisons to scores from a Gary, Indiana, administration were drawn.

The findings are presented in a uniform pattern to facilitate following the results. The 1975 English version data are examined, followed by 1976 English version data, then comparisons of the two. The 1975 Spanish version data, the 1976 Spanish version data and then a comparison of the two conclude this section. Finally, the English and Spanish versions are compared. Within each section, the variables are sequenced as follows: group, school, grade, ethnicity, and sex.

The 1975 English Version Results

The primary study of grades K-3 attitudes in the Development Associates' external evaluation design called for a 100% sampling of these grades in three experimental and two comparison schools, with nearly 50% sampling from two other South Texas districts. The only exclusions from this plan were students absent during the entire week of the administration, those who spoke no English, and some few who answered every item alike (these instruments were discarded). The resulting sample totalled 1620 children.

The study attempted to discover the range of attitudes for the Edgewood sample, whether differences existed between the experimental and comparison groups, and whether there were school, grade, ethnicity, or sex differences. Additionally, the two target groups were compared to two schools from other districts with similar populations.

Group and School Comparisons

The examination of the school groupings produced a highly significant (p<.001) difference among them. (See Table 5.) Comparison was highest at 143.21, followed by experimental at 139.96; the other district group had the low mean of 134.63. Comparison was significantly higher than the other district group but not statistically higher than experimental.

The analysis of variance showed a significant difference (p<.001) among the seven schools' total mean scores. (Table 6) The lowest was an other district school with a mean of 131.67; the two comparison schools were high with 143.34 and 143.10. The entire sample mean was 140.78.

Table 5: Analysis of Variance: 1975 English Total Mean Scores by School Group

Source	df	SS	MS	F	p
Between Groups	2	9584	4792.00	10.58	.001
Within Groups	1617	732416	452.95		
Total	1619	742000			

Group	N	Mean	sd
Experimental	844	139.96	21.73
Comparison	637	143.21	20.23
Other	139	134.63	23.20
Total	1620	140.78	21.41

Table 6: Analysis of Variance: 1975 English Total Mean Scores by School*

Source	df	SS	MS	F	p
Between Schools	6	11056	1842.67	4.07	.001
Within Schools	1613	730960	453.17		
Total	1619	742016			

School	N	Mean	sd
1	321	140.01	21.06
2	310	139.82	20.57
4	213	140.09	24.30
5	326	143.10	21.63
6	311	143.34	18.68
7	63	138.21	22.30
8	76	131.67	23.66
Total	1620	140.78	21.41

*Schools 1, 2, and 4 were in the experimental group; 5 and 6 were in the comparison group; 7 and 8 were from other districts.

The four subtests were also significantly different across schools and school groups, with peer at the lowest level of significance (schools $p<.05$, groups $p<.01$) and school subtest at the greatest level ($p<.001$ for schools and groups). (Table 7) A comparison school was always highest and the comparison group was always highest; a school from another district and the other district group were always lowest. The greatest numerical difference in scores occurred in the school subtest where the low mean was 31.93 and the high was 36.06.

Table 7: Comparison of 1975 English Subtest Means by School and Group

	Means			
School	Peer	School	Home	Community
1	36.74	34.98	34.69	33.65
2	36.36	35.28	34.31	33.67
4	36.68	34.56	35.12	33.72
5	36.92	35.94	35.27	34.84
6	37.08	36.06	35.26	34.75
7	35.90	35.86	33.98	32.44
8	34.49	31.93	32.66	32.59
F	2.17	5.23	2.65	3.04
p	.043	.001	.015	.006
Group				
Experimental	36.58	34.98	34.66	33.68
Comparison	37.00	36.00	35.31	34.79
Other	35.12	33.71	33.26	32.53
F	5.24	8.68	6.22	9.12
p	.006	.001	.002	.001
Total	36.62	35.27	34.80	34.02

In the other calculations, the significant differences on the subtest scores were always between comparison and other. Comparison was statistically higher than experimental only on the peer subtest, although numerically comparison was always higher.

School variations within grades were also investigated to help determine the sources of the school differences. Kindergarten (p<.001) and second (p<.001) mean scores differed significantly among schools and school groups. (Table 8) Third differed among schools (p<.01) but not among groups.

The variations were not uniform by school. The high kindergarten mean was experimental, school 1 (153.15), and the experimental group had the highest mean. A comparison school, number 6, had a mean of 146.22 for the second grade high. The comparison group was significantly higher than experimental and other. School 6 of comparison and 4 of experimental both had the high means for third grade and the three groupings were not significantly different for this grade.

Table 8: Comparison of 1975 English Total Mean Scores by Grade by School and School Group

School/Group	Means			
	K	1	2	3
1	153.15	134.94	135.14	139.04
2	141.17	142.40	137.22	138.86
4	144.49	134.43	133.46	147.07
5	151.03	143.43	137.11	142.09
6	137.89	140.15	146.42	147.36
7	135.23	137.32	142.68	*
8	128.75	135.74	130.08	*
Total	143.87	139.08	138.17	142.74
F	7.15	1.95	4.46	3.53
p	.001	.070	.001	.008
Group	K	1	2	3
Experimental	146.82	137.57	135.63	141.31
Comparison	144.28	142.13	141.79	144.94
Other	131.85	136.45	135.52	*
F	8.29	2.28	5.18	3.11
p	.001	.101	.006	.075

*Third grade was not tested in the other district schools and they were not included in the analysis.

Grade Comparisons

Three of the grades (K, 1, and 2) were present in all seven schools. Third grade was tested only in the experimental and comparison schools. When total scores by grades were analyzed without taking school into account, a significant difference was found. (Table 9) Kindergarten had the high mean (143.87). There was then a drop at first grade (139.08), a further decrease for second (138.17), and third grade then rose to within a point (142.74) of the kindergarten mean.

Table 9: Analysis of Variance: 1975 English Total Mean Scores by Grade

Source	df	SS	MS	F	p
Between Grades	3	9152	3050.67	6.73	.001
Within Grades	1616	732864	453.50		
Total	1619	742016			

Grade	N	Mean	sd
Kindergarten	361	143.87	22.58
First	439	139.08	22.69
Second	432	138.17	19.45
Third	388	142.74	19.95
Total	1620	140.78	21.41

These grade differences were evident also in three of the subtests: school (p<.001), home (p<.05), and community (p<.001). (Table 10) The peer subtest was not statistically different across grades. Less than two points separated the highest numerical grade score from the lowest. Kindergarten had the highest mean score on the school, home, and community subtests; third was slightly greater than kindergarten on the peer score (statistically they were the same).

Table 10: Comparison of 1975 English Subtest Mean Scores by Grade

	Means			
Grade	Peer	School	Home	Community
Kinder	36.98	36.45	35.41	35.07
First	36.43	34.84	34.30	33.42
Second	36.08	34.48	34.31	33.24
Third	37.11	35.55	35.33	34.58
Total	36.62	35.27	34.80	34.02
F	2.46	6.84	3.67	7.26
P	.060	.001	.012	.001

The peer score was, at every grade, the highest of all the subtests. Note also that at every grade, school was second highest, followed by home, with community the lowest. The numerical differential between the high (peer) and the low (community) was greatest for first and second grades with an approximate variation of three points.

To continue the analyses, group and grade, and school and grade ANOVAs were calculated. Utilizing grades K-2 across all seven schools, the main effect of school, and the school-grade interaction were significant at p<.001; grade significance was p<.05. (Table 11)

The results were not uniform, however. Kindergarten was highest in schools 1, 4, and 5. First grade was highest in schools 2 and 8. Second grade was highest in schools 6 and 7. Thus even though significance was found in school and grade analyses, and although for all schools kindergarten was highest, no clear pattern of differences emerged.

Table 11: Analysis of Variance: 1975 English Total Mean Scores by School by Grade (K-2)

Source	df	SS	MS	F	p
Main Effects	8	27864.28	3483.04	7.77	.001
School	6	19837.72	3306.29	7.37	.001
Grade	2	3165.44	1582.72	3.53	.029
Two Way Interaction					
School/Grade	12	25061.19	2088.43	4.66	.001
Explained	20	43061.81	2153.09	4.80	.001
Residual	1211	542970.88	448.37		
Total	1231	586032.69	476.06		

School/Grade	N	Mean	sd
1	230	140.39	22.15
Kinder	68	153.15	18.98
First	89	134.94	22.78
Second	73	135.14	19.31
2	234	140.14	21.74
Kinder	60	141.17	20.11
First	86	142.40	23.67
Second	88	137.23	20.73
4	145	136.81	23.68
Kinder	39	144.49	21.17
First	58	134.43	25.00
Second	48	133.46	23.03
5	256	143.37	21.48
Kinder	72	151.03	23.70
First	95	143.43	20.58
Second	89	137.11	18.54
6	228	141.87	18.98
Kinder	76	137.90	21.76
First	62	140.15	20.45
Second	90	146.42	14.01
7	63	138.21	22.30
Kinder	22	135.23	20.39
First	22	137.32	27.14
Second	19	142.68	18.32
8	76	131.67	23.66
Kinder	24	128.75	25.20
First	27	135.74	19.47
Second	25	130.08	26.45
All Schools	1232	140.16	21.82
Kinder	361	143.87	22.58
First	439	139.08	22.69
Second	432	138.17	19.85

The school groupings for these grades, K-2, showed significant differences (Table 12). Main effects for school and grade yielded $p<.001$; the interaction gave $p<.01$.

Kindergarten was the highest of the three grades in the comparison and experimental groups but first grade had the highest mean in the other district grouping. On the overall scores, the comparison mean was high, experimental was in the middle, and the other district's group was lowest.

Table 12: Analysis of Variance: 1975 English Total Mean Scores by Group by Grade (K-2)

Source	df	SS	MS	F	p
Main Effects	4	18901	4725.16	10.24	.001
Group	2	8127	4063.53	8.81	.001
Grade	2	12945	6472.35	14.03	.001
Two Way Interaction					
Group/Grade	4	6700	1674.92	3.63	.006
Explained	8	21666	2708.25	5.87	.001
Residual	1223	564367	461.46		
Total	1231	586033	476.06		

Group/Grade	N	Mean	sd
Experimental	609	139.44	22.38
Kinder	167	146.82	20.52
First	233	137.57	23.86
Second	209	135.63	20.76
Comparison	484	142.67	20.33
Kinder	148	144.28	23.59
First	157	142.13	20.53
Second	179	141.79	17.02
Other	139	134.63	23.20
Kinder	46	131.85	23.01
First	49	136.45	22.98
Second	44	135.52	23.90
All Groups	1232	140.16	21.82
Kinder	361	143.87	22.58
First	439	139.08	22.69
Second	432	138.17	19.85

Five schools were represented in all four grade samples, K-3. Investigating this combination separately (Table 13), all main effects and the two way interaction were significant at $p<.001$.

Table 13: Analysis of Variance: 1975 English Total Mean Scores by School by Grade (K-3)

Source	df	SS	MS	F	p
Main Effects	7	24432	3490.32	8.23	.001
School	4	11734	2933.53	6.91	.001
Grade	3	15839	5279.58	12.44	.001
Two Way Interaction					
School/Grade	12	27028	2252.37	5.31	.001
Explained	19	41964	2208.64	5.21	.001
Residual	1461	619997	424.37		
Total	1480	661962	447.27		

School/Grade	N	Mean	sd
1	321	140.01	21.06
Kinder	68	153.15	18.98
First	89	134.94	22.78
Second	73	135.14	19.31
Third	91	139.04	18.11
2	310	139.82	20.57
Kinder	60	141.17	20.11
First	86	142.40	23.67
Second	88	137.23	20.73
Third	76	138.86	16.55
4	213	140.09	24.30
Kinder	39	144.49	21.17
First	58	134.43	25.00
Second	48	133.46	23.03
Third	68	147.07	24.30
5	326	143.10	21.63
Kinder	72	151.03	23.70
First	95	143.43	20.58
Second	89	137.11	18.54
Third	70	142.09	22.31
6	311	143.34	18.68
Kinder	76	137.90	21.76
First	62	140.15	20.45
Second	90	146.42	14.01
Third	83	147.36	17.31
All Schools	1481	141.36	21.15
Kinder	361	143.87	22.58
First	439	139.08	22.69
Second	432	138.17	19.85
Third	388	142.74	19.95

In the all school statistics, kindergarten had the highest mean. The means for schools 1 and 5 were alike (153.15 and 151.03) and these were statistically higher than the means for schools 2, 4, and 6, with a 14 point differential for school 1; school 5 was higher by 8 points. Third grade, second highest on the all schools mean, was highest in schools 4 and 6, with nearly 13 and 10 points higher respectively. First grade was highest only in school 2 but it was not significantly higher than kindergarten. The second grade had the lowest mean score in four of the five schools.

The five schools containing all four grades represented only the experimental and comparison groups. Calculating group and grade results showed no significant group differences; grade as a main effect remained significant ($p<.001$) and the group and grade interaction was $p<.01$. (Table 14)

Table 14: Analysis of Variance: 1975 English Total Mean Scores by Group (Experimental and Comparison) by Grade (K-3)

Source	df	SS	MS	F	p
Main Effects	4	15891	3972.65	9.10	.001
Group	1	505	504.88	1.16	.282
Grade	3	13536	4512.09	10.33	.001
Two Way Interaction					
Group/Grade	3	3621	1207.11	2.76	.040
Explained	7	18553	2650.48	6.07	.001
Residual	1473	643408	436.80		
Total	1480	661962	447.27		

Group/Grade	N	Mean	sd
Experimental	844	139.96	21.73
Kinder	167	146.82	20.52
First	233	137.57	23.86
Second	209	135.62	20.76
Third	235	141.31	19.92
Comparison	637	143.21	20.23
Kinder	148	144.28	23.59
First	157	142.13	20.53
Second	179	141.79	17.02
Third	153	144.95	19.86
Both Groups	1481	141.36	21.15
Kinder	361	143.87	22.58
First	439	139.08	22.69
Second	432	138.17	19.85
Third	388	142.74	19.89

In conclusion, then, the analyses showed both school and grade as differentiating variables. However, no uniform pattern of differences existed. Group by grade studies gave more clear cut results. Comparison was significantly higher than the other district group, but not higher than experimental, when all seven schools were included in the grades K-2 analyses. In the K-3 study, in which no school from the other districts group was represented, comparison was not significantly higher than experimental.

Comparison by Ethnicity

Four ethnic groups were present in the study samples: Mexican Americans, Anglos, Blacks, and Orientals. The four were very unevenly represented, however, with Mexican Americans making up 87.5% of the sample, Anglos 6.7%, Blacks 4.4%, and Orientals only 1.4%. When these last three were subdivided by school and grade, their numbers were frequently too small for meaningful analysis. Caution must be exercised in interpreting any of the ethnicity studies. Increased samples of the three with low Ns might show different patterns. Also, the attitudes of the various ethnic groups might be different in a different ethnic mixture context.

Analysis of variance procedures on the 1975 English total mean scores by ethnicity resulted in a significant difference (p<.05) with Anglos and Orientals highest and Mexican Americans lowest. (Table 15) Five points separated their scores (145.74 and 145.52 to 140.19). The Anglos and Orientals were not significantly higher than Blacks and Blacks were not higher than Mexican Americans. Since Mexican Americans predominated in the population, the overall mean approximated their level (140.78).

Table 15: Analysis of Variance: 1975 English Total Mean Scores by Ethnicity

Source	df	SS	MS	F	p
Between Ethnic Groups	3	4144	1381.33	3.03	.028
Within Ethnic Groups	1616	736064	455.49		
Total	1619	740208			

Ethnicity	N	Mean	sd
Mexican American	1417	140.19	21.69
Anglo	108	145.74	18.79
Black	72	143.40	18.11
Oriental	23	145.52	19.72
Total	1620	140.78	21.38

The peer and home subtest mean scores varied significantly when examined by ethnicity (Table 16). Anglos had the highest mean for the peer scores. Orientals were highest on community.

The pattern of high peer scores, graduating downward to lower community scores when examined by ethnicity, approximated that found for grade. The only exception was the pattern for Orientals, where peer remained high but was followed by home, then school, and community.

Table 16: Comparison of 1975 English Subtest Mean Scores by Ethnicity

	Means				
Ethnicity	N	Peer	School	Home	Community
Mexican American	1417	36.46	35.17	34.62	33.90
Anglo	108	38.36	35.93	35.89	35.35
Black	72	36.93	36.07	36.03	33.94
Oriental	23	37.26	35.91	36.91	35.43
Total	1620	36.62	35.27	34.80	34.02
F		3.32	0.88	3.11	1.97
p		.019	.452	.025	.115

School and ethnicity analyses were performed. School was significant as a main effect but neither ethnicity as a main effect nor the school/ethnicity interaction was significant. Eliminating the few Orientals from the analyses did not essentially change the relationships.

Calculating ethnicity means by school showed interesting variations. Looking at each school separately, in Table 17, Anglos were highest, although not always significantly, in schools 1, 4, 5, and 7. Mexican Americans were highest in school 8, Blacks in school 2, and Orientals in school 6. Across schools, however, only Mexican Americans differed statistically. Mexican Americans in schools 5 and 6 were significantly higher than in schools 7 and 8.

Table 17: Comparison of 1975 Ethnic Groups' English Total Mean Scores by School

	Total Scores			
School	Mex. Am.	Anglo	Black	Oriental
1	139.95	146.64	140.48	142.25*
2	139.34	139.50	145.82	145.17*
4	139.40	148.67	145.33	143.00*
5	142.74	150.26	139.00	136.50*
6	142.91	143.18	149.00	159.00*
7	136.83	158.50*	*	*
8	131.74	130.00*	*	*
Total	140.19	145.71	143.40	145.52
F	3.77	1.07	0.68	*
p	.001	.379	.612	*

* Schools and/or ethnic groups with vacant and small cells were eliminated from the analysis of variance calculations. The means of all cells are shown for comparative purposes.

Grade and ethnicity calculations were also done. Grade as a main effect was significant at $p<.001$. Ethnicity as a main effect and in the two way interaction with school showed no statistical differences.

Taking each ethnic group that had sufficient cell numbers (Orientals were not analyzed) and calculating the K through 3 grade variations, showed Mexican Americans to vary significantly by grade but Anglos and Blacks did not. (Table 18) Mexican Americans were significantly higher at kindergarten than at first and second.

Table 18: Analysis of Variance: Mexican Americans' 1975 English Total Mean Scores by Grade (K-3)

Source	df	SS	MS	F	p
Between Grades	3	8704	2901.33	6.22	.001
Within Grades	1413	659504	466.74		
Total	1416	668208			

Grade	N	Mean	sd
Kinder	319	143.76	22.69
First	391	138.04	22.67
Second	386	137.99	20.43
Third	321	141.93	20.52
Total	1417	140.19	21.60

In general, then, Anglos and Orientals had like total scores and these were significantly higher than Mexican Americans. Blacks were in between. The school and community subtests did not vary with ethnicity. Anglos were highest on the peer subtest ($p<.05$) and Orientals were highest on the home section ($p<.05$).

Only Mexican Americans differed significantly by school, ranging from a school 8 low of 131.74 to highs for school 5 of 142.74 and school 6 of 142.91. Similarly, only Mexican Americans differed across grades with kindergarten high, 143.76, and second grade low, 137.99 ($p<.001$).

Comparisons by Sex

Analyses of the entire sample revealed no main effect for sex on any subtest nor for the total mean score. The mean scores for both genders were similar: male 140.20, female 141.38. Analyses for interaction effects of school and sex, group and sex, grade and sex, and ethnicity and sex, showed no significant sex differences.

Summary of the 1975 English Version Results

The examination of the total scores gave the following results:

1. The scores varied by school group with comparison always highest and the other districts schools lowest; comparison was not statistically higher than experimental.
2. The overall scores differed significantly by school; comparison schools 5 and 6 were higher on the total and on all four subtests.
3. Grades differed significantly with kindergarten highest and second grade lowest on the overall analysis.
4. Schools fluctuated unevenly when analyzed by grade; 1 (experimental) was high in K, 5 (comparison) in first, 6 (comparison) in second and third (the difference at second grade was not significant).
5. In group by grade studies, experimental was significantly highest at kindergarten, comparison at second grade.
6. The school (all seven) and grade (K-2) ANOVAs showed significant main and interaction effects but the differences were not in a uniform pattern.
7. These same combinations when studied as group and grade were likewise statistically significant and not of uniform pattern.
8. The school (five) and grade (K-3) analysis was significant at $p<.001$ for all main effects and the two way interaction; again, however, the results were not of a uniform pattern.
9. Calculating group by grade, the analysis showed grade to remain significant as a main effect but group did not.
10. Total score by ethnicity was significant ($p<.05$) with Anglos and Orientals high, Blacks in the middle, Mexican Americans lowest.
11. Mexican Americans varied significantly across schools; the other ethnic groups did not.
12. Mexican Americans also differed significantly among the four grades; the others did not.
13. Sex was not a significant factor in any of the analyses performed.

The total scores differed nearly 12 points among the schools and over 8 points among the three school groupings. The greatest grade and ethnicity variations were about 5.50 points.

In general, the 1975 English version administration total scores varied by group, school, and grade but not in a uniform pattern. Some ethnicity differences were discovered and they, likewise, were not uniform. No sex differences were encountered.

The four subtests that made up this social attitudes instrument varied in about the same proportion as the total scores. The peer, home, and community mean subtest scores differed about 2.50 points among schools but the school subtest means showed a difference of 4.13 points. The group differences approximated 2 points on all the subtests. Grade and ethnicity differences were always less than 2 points. In nearly every analysis, the peer subtest score was numerically highest. The scores then declined slightly and successively on the school, home, and community subtests. The only important exception was that Orientals scored highest on peers, followed by home, and then school and community.

The 1976 English Version Results

The 1976 administration was intentionally conducted with a smaller randomly selected sample of the experimental and comparison classrooms involved in the previous study. The 1975 kindergarten children had become first graders, first moved up to second, second to third, and the third graders were now in the fourth grade. The 1975 grade designations, however, are maintained in the tables and narrative to keep uniformity of presentation.

The other districts' schools utilized in 1975 were unavailable at the time of the 1976 English administration. Two others, Benavides and Alamo Heights, used the Purdue and their scores were included to give non-Edgewood district means for purposes of generalization. The first of these, school 9 (Benavides), was in a small town much like the other districts schools in the 1975 study. The other, school 3 (Alamo Heights), was from another district in San Antonio.

Group and School Comparisons

The means by group were examined: experimental (schools 1, 2, 4), comparison (schools 5, 6), and other (schools 3, 9). As shown in Table 19, the experimental and other groups' means were nearly the same (145.93 and 144.82) and these were significantly lower than the comparison group mean (150.95).

Table 19: Analysis of Variance: 1976 English Total Mean Scores by Group

Source	df	SS	MS	F	p
Between Groups	2	3624	1812.00	3.67	.025
Within Groups	708	349318	493.39		
Total	710	352942			

Group	N	Mean	sd
Experimental	358	145.93	22.01
Comparison	149	150.95	22.35
Other	204	144.82	22.46
Total	711	146.67	22.30

With two exceptions, the school means clustered closely about the overall mean of 146.67. (Table 20) The exceptions were another district, small town school mean of 136.86, the low, and one of the comparison schools, with the high mean of 154.96. These two were significantly different ($p<.05$).

Table 20: Analysis of Variance: 1976 English Total Mean Scores by School

Source	df	SS	MS	F	p
Between Schools	6	8999	1499.83	3.07	.006
Within Schools	704	343943	488.56		
Total	710	352942			

School	N	Mean	sd
1	158	144.34	19.85
2	115	147.23	24.71
3	182	145.79	23.00
4	85	147.12	22.03
5	65	145.77	22.45
6	84	154.96	21.57
9	22	136.86	15.59
Total	711	146.67	22.30

The four subtests were also examined for differential school and group performance on the 1976 English test administration. Analysis of variance showed no significant differences on the home and community subtests by school. The peer subtest, however, was significantly lower for school 9, another district school, with a mean of 31.59. The other six clustered closely about the 37.55 mean for all schools. (Table 21)

Table 21: Analysis of Variance: 1976 English Peer Mean Scores by School

Source	df	SS	MS	F	p
Between Schools	6	1526	254.39	6.44	.001
Within Schools	704	27802	39.50		
Total	710	29329			

School	N	Mean	sd
1	158	37.63	5.43
2	115	38.22	6.75
3	182	36.53	6.65
4	85	38.06	6.78
5	65	37.26	6.34
6	84	39.93	6.10
9	22	31.59	4.58
Total	711	37.55	6.43

No statistically significant differences were found among the school groupings on the school, home, or community subtests. The comparison group was significantly higher than the experimental and other district groups on the peer subtest.

The ANOVA showed a difference among the schools on the school subtest. The pattern of the means was quite different from those shown for the peer subtest. (Table 22) In this case, school 1, an experimental school, and 9, another district school, were about equally low, 35.78 and 35.09, when compared to the highest, number 6 with 40.08 on the peer subtest. The other five schools were near the all school mean of 36.91.

Table 22: Analysis of Variance: 1976 English School Mean Scores by School

Source	df	SS	MS	F	p
Between Schools	6	1172	195.28	4.20	.001
Within Schools	704	32734	46.50		
Total	710	33906			

School	N	Mean	sd
1	158	35.79	6.07
2	115	37.17	7.37
3	182	36.51	7.40
4	85	36.61	6.86
5	65	37.22	6.85
6	84	40.08	6.10
9	22	35.09	6.15
Total	711	36.91	6.91

Separating the schools by grades and performing one way analyses of variance yielded uneven results. Kindergarten scores were not different by school, that is, they were uniformly high across schools. Similarly, third grade yielded no significant differences by school. The first graders' scores, however, did vary significantly ($p<.05$) with school 6's mean of 150.37 being highest, school 1's mean of 136.36 and school 9's mean of 136.86 being the two lowest. (Table 23)

Table 23: First Grade 1976 English Total Scores by School

Source	df	SS	MS	F	p
Between Schools	6	5598	933.00	2.14	.05
Within Schools	230	100329	436.21		
Total	236	105927			

School	N	Mean	sd
1	44	136.36	18.37
2	37	144.78	21.45
3	52	145.21	25.01
4	30	150.37	21.50
5	17	145.65	19.32
6	35	148.00	19.45
9	22	136.86	15.59
Total	237	143.82	21.19

The second graders' mean scores also differed significantly across schools ($p<.01$). (Table 24) School 6 again had the high mean of 157.65; schools 1 and 2 had 139.65 and 137.59 respectively. (Second grade was not tested in school 9.)

Table 24: Second Grade 1976 English Total Mean Scores by School

Source	df	SS	MS	F	p
Between Schools	5	6137	1227.40	3.73	.003
Within Schools	168	55235	328.78		
Total	173	61372			

School	N	Mean	sd
1	20	139.65	16.86
2	22	137.59	20.97
3	52	143.69	17.10
4	27	140.00	20.54
5	30	141.33	16.68
6	23	157.65	17.39
Total	174	143.32	18.83

The possibility still remained, however, that grade differences were unduly affecting the school and group means. An ANOVA of school and grade showed a trend toward grade as a main effect but it was not significant at the .05 level.

The same analysis by group, though, demonstrated grade as a main effect to be significant at p<.001 when third grade, present in only one sample, was eliminated. (Table 25)

Table 25: Analysis of Variance: 1976 English Total Mean Scores by Group by Grade (K-2)

Source	df	SS	MS	F	p
Main Effects	4	16991	4247.84	8.63	.001
Group	2	2347	1173.32	2.38	.091
Grade	2	11431	5715.70	11.61	.001
Two Way Interaction					
Group/Grade	4	1739	434.72	0.88	.999
Explained	8	19421	2427.58	4.93	.001
Residual	618	304213	492.25		
Total	626	323634	516.99		

Group/Grade	N	Mean	sd
Experimental	300	145.93	22.93
Kinder	120	153.74	24.58
First	111	142.96	20.93
Second	69	139.13	19.43
Comparison	149	145.93	22.36
Kinder	44	158.41	27.86
First	52	147.23	19.25
Second	53	148.42	18.70
Other	178	144.82	22.44
Kinder	52	148.54	26.21
First	74	142.73	22.84
Second	52	143.69	17.10
Total	627	146.67	22.74

In summary, although the analyses on the 1976 Total English version scores showed significant differences among schools and among the three school groupings, grade was a more important differentiating factor. The schools did vary, however, on the peer subtest, with 9 the lowest, and on the school subtest, with schools 1 and 9 lower.

Grade Comparisons

Kindergarten scored significantly higher than first, second, and third grades on the total instrument score (Table 26). The kindergarten mean of 153.44 was notably higher than that of third grade (144.19).

Table 26: Analysis of Variance: 1976 English Total Mean Scores by Grade

Source	df	SS	MS	F	p
Between Grades	3	14288	3572.00	7.45	.001
Within Grades	707	338664	479.68		
Total	710	352942			

Grade	N	Mean	sd
Kindergarten	216	153.44	25.76
First	237	143.82	21.19
Second	174	143.32	18.83
Third	84	144.19	18.60
Total	711	146.67	22.30

Kindergarten scored significantly higher on all four subtests, maintaining approximately the same differential between them and the next highest. (Table 27) First, second, and third grades clustered closely together on the subtest means.

Table 27: Comparison of 1976 English Subtest Mean Scores by Grade

		Mean Scores			
Grade	N	Peer	School	Home	Community
Kindergarten	216	39.41	38.93	38.01	37.57
First	237	36.46	36.25	35.86	35.14
Second	174	36.85	36.10	35.37	35.20
Third	84	37.25	35.24	36.81	35.11
Total	711	37.55	36.91	36.50	35.89
F		6.99	7.20	5.23	4.74
p		.001	.001	.001	.001

Comparisons by Ethnicity

Four ethnic groups were present in the sample: Mexican Americans, Anglos, Blacks, and Orientals. The first, however, made up 61.3% of the students. Mexican Americans and Anglos scored about the same: 145.19 and 145.81 respectively. (Table 28) Blacks (151.07) and Orientals (152.37) scored alike and significantly higher than the other two.

Table 28: Analysis of Variance: 1976 English Total Mean Scores by Ethnicity

Source	df	SS	MS	F	p
Between Ethnic Groups	3	4758	1586.00	3.22	.022
Within Ethnic Groups	707	348184	492.48		
Total	710	352942			

Ethnic Group	N	Mean	sd
Mexican American	436	145.19	22.44
Anglo	122	145.81	22.92
Black	96	151.07	19.73
Oriental	57	152.37	22.63
Total	711	146.67	22.30

Removal of the smaller N, higher mean, Orientals from the analysis then showed Blacks significantly higher ($p<.05$) than Anglos and Mexican Americans. Anglos versus Mexican Americans showed their scores to be alike.

The ethnic groups scored statistically alike on the school and community subtests. Orientals and Blacks were higher than Anglos and Mexican Americans on the peer subtest. (Table 29)

Table 29: Analysis of Variance: 1976 English Peer Subtest Mean Scores by Ethnicity

Source	df	SS	MS	F	p
Between Ethnic Groups	3	370	123.42	3.01	.029
Within Ethnic Groups	707	28958	40.96		
Total	710	29328			

Ethnic Group	N	Mean	sd
Mexican American	436	37.22	6.60
Anglo	122	37.00	6.50
Black	96	38.89	5.60
Oriental	57	38.96	5.84
Total	711	37.55	6.43

The same configuration of mean scores was found for the home subtest. (Table 30) Blacks and Orientals scored significantly higher than Mexican Americans and Anglos. Again, the numerical differences among the scores was small.

Table 30: Analysis of Variance: 1976 English Home Subtest Mean Scores by Ethnicity

Source	df	SS	MS	F	p
Between Ethnic Groups	3	560.06	186.69	4.70	.003
Within Ethnic Groups	707	28061.94	39.69		
Total	710	28622.00			

Ethnic Group	N	Mean	sd
Mexican American	436	35.97	6.39
Anglo	122	36.39	6.22
Black	96	37.83	5.85
Oriental	57	38.65	6.47
Total	711	36.50	6.35

Each ethnic groups' scores were also examined across schools when possible (not every ethnic group was present in all schools). Mexican Americans scored significantly different across schools with their mean in school 6 significantly higher than in school 9 (Table 31).

Table 31: Mexican Americans' 1976 English Total Mean Scores by School

Source	df	SS	MS	F	p
Between Schools	6	6120	1020.00	2.06	.05
Within Schools	429	212866	496.19		
Total	435	218986			

School	N	Mean	sd
1	88	141.92	20.41
2	76	144.59	24.55
3	82	144.65	23.79
4	61	145.95	22.80
5	47	144.96	22.78
6	61	153.28	20.79
9	21	137.95	15.09
Total	436	145.19	22.44

Calculations of school and ethnicity, school group and ethnicity, and grade and ethnicity produced no significant main or interaction effects for ethnicity. School, grade, and ethnicity ANOVAs likewise showed no ethnicity main effect nor interaction.

Summarizing, ethnicity was generally a differentiating variable in the 1976 English scores when examined without regard to group, school, or grade. Blacks and Orientals had significantly higher mean scores than Mexican Americans and Anglos on the peer and home subtests, and on the total instrument. All four ethnic groups scored alike on the school and community scales. While the differences were statistically significant, p .05 but always less than .001, the numeric variation was small. Interaction analyses showed no effect for ethnic groups. Mexican Americans were the only ethnic group that varied across schools. Language fluency would not appear to have been a factor since some of the Mexican Americans were surely less fluent in English than Anglos. Previous results (64) tended to suggest that those with lower fluency in English scored close to those who were more fluent.

Sex Comparisons

The 1976 English test included 323 males and 388 females. Their means were 145.92 and 147.29 respectively and the difference was not statistically significant. Further, no subtest was found to differ between the sexes.

Summary of the 1976 English Version Results

The total mean scores differed substantially by school on this administration and a one way ANOVA showed this to be significant. Kindergarten and third grade did not vary across schools but first and second did. School and grade analyses showed a trend for school to remain a significant factor but grade, with kindergarten significantly higher than the others, was of the greatest significance. The comparison group scored significantly higher than experimental or other districts schools, but again grade was a mediating factor.

Orientals and Blacks scored significantly higher than Anglos and Mexican Americans. Mexican Americans scored significantly different across schools. None of the ethnic groups varied significantly across grade. Sex was not a significant variable in any of the analyses.

The numerical difference among the total mean scores was 6 points for school groupings, 18 among schools, 9 for grade, and 7 for ethnicity. The school groupings scored nearly the same on the school, home, and community subtests; the comparison group peer subtest mean was 3 points higher than the other two. When analyzed by schools, the home and community subtests were alike; the school subtest means differed by 3 points. The peer subtest variation was 8 points but almost all of this was due to one low other district school. Grade differences were 2 to 2.50 points on the peer, homw, and community subtests but 3.50 on the school subtest. The subtest differences by ethnicity were low, less than 2 points on all except home, where a 3 point variation was found.

Comparison of the English Version Results: 1975→1976

An important question in the research was whether or not the experimental program, through its efforts to improve the learning environment, would affect the Purdue attitude scores during the one year interval, 1975→1976. Further, to ascribe effect from the program, changes would have to be greater than those registered by the comparison group.

Two measures of change were utilized, one included the total samples in the two administrations, the other taking into account only those students who took both, a repeated measures approach. The total samples for all students numbered 1620 in 1975 and 711 in 1976. The "repeating students" number was 439. Both measures of change indicated minimal attitudinal change or stability, since the first provided very large numbers of students and the second specifically looked at how individual students scored in each of the two years. (Table 32)

Every category in both the total and the repeated student samples showed a mean raw score increase although several were not statistically significant. Schools 4 and 6 registered significant increases in both measures. The experimental and comparison groups, first grade, Mexican Americans, males and females, and all students likewise showed significant gains over the one year period. (Table 32) Substantial differences occurred between the total sample and repeated student means in some categories.

School was a significant differential variable in both administrations. Grade, too, generally remained significant with kindergarten pupils having high total sample means for 1975 and 1976. This was not the case on the repeated student means: kindergarten, first, and second graders were alike and third grade was significantly higher than all three. The twenty-two point difference between the third grade total sample and repeated student means was also the largest for any category.

The repeated students' means showed a tendency to be substantially higher than those for the total sample's means. One possibility of bias lay in absenteeism since research suggests that students with lower attitudes attend school less, and the 439 repeating students would likely have included fewer of these students. A second bias could lie in students "learning the instrument" through the repeated administrations; the 439 had greater exposure to the instrument. The one year time lapse would appear to have made this bias relatively unimportant.

Finally, the students were, of course, one year older and presumably more mature in the 1976 administration: kindergarten was then first grade, first was second, second was third, and third was now in fourth. However, since higher grades did not always produce higher mean scores on the Purdue, this influence on the 1975→1976 rises was largely discounted.

Table 32: Total Sample and Repeated Student Comparisons between 1975 and 1976 English Total Mean Scores

	Total Sample			Repeated Students		
Variable	1975	1976	p	1975	1976	p
SCHOOL						
1	140.01	144.34	.010	141.36	142.42	NS
2	139.82	147.23	.002	146.40	149.02	NS
3	*	145.79	*	*	*	*
4	140.09	147.12	.003	128.45	134.73	.006
5	143.10	145.77	NS	153.69	156.84	NS
6	143.34	154.96	.001	156.41	160.15	.004
7	138.21	*	*	*	*	*
8	131.67	*	*	*	*	*
9	*	136.86	*	*	*	*
GROUP						
Experimental	139.96	145.93	.002	142.17	144.08	.001
Comparison	143.21	150.95	.001	155.18	158.66	.001
Other Districts	**	**	**	**	**	**
GRADE						
Kindergarten	143.87	153.44	.001	140.03	141.50	NS
First	139.08	143.82	.008	139.56	144.77	.001
Second	138.17	143.32	.006	142.79	143.55	NS
Third	142.74	144.19	NS	164.17	166.19	NS
ETHNICITY						
Mexican American	140.19	145.19	.010	142.02	145.04	.001
Anglo	145.75	145.81	NS	146.92	148.96	NS
Black	143.40	151.07	.008	154.18	155.45	NS
Oriental	145.52	152.37	.006	158.96	159.15	NS
SEX						
Male	140.20	145.92	.002	144.59	147.01	.001
Female	141.38	147.29	.001	147.16	149.51	.001
ALL STUDENTS	140.78	146.67	.003	146.03	148.41	.001

*Not tested for the year indicated.

**Note that although there were "other districts" students in both administrations, no school was in both. The 1975 mean was 134; 1976 was 144.

The lack of uniformity in the school and grade results also merits attention. Since nearly all students were tested in the total sample administration, 1975, it would appear that the differences among schools and grades were real.

The comparison schools were statistically higher than the experimental in both administrations and in both the total and repeated student samples. The gains from 1975 to 1976 were about the same for the two samples.

Mexican Americans had lower mean scores than did the other ethnic groups; the difference, however, was not always significant. Orientals were usually highest, but again, not always significantly so. As a generalization, Blacks and Orientals scored statistically alike. Mexican Americans scored significantly different across schools, at times varying over twenty points. The other three ethnic groups did not differ statistically across schools. Sex did not influence mean scores in any of the calculations, alone nor in combinations with school, grade, or ethnicity except that both males and females increased from 1975 to 1976.

In conclusion, the research pointed to differing school and grade influences on K-3 attitudes when measured with the English instrument. The comparison schools were higher than the experimental. Ethnicity appeared to be a significant variable but some inconsistency was found, leading to a classification of the results as tentative. Scores did not vary between males and females but their scores increased significantly from 1975 to 1976 on the English instrument.

The mean scores of the four subtests contained in this social attitude instrument remained nearly proportional in the longitudinal analyses and the differences among them was likewise similar between the two years. The community score was the most stable and the lowest of the subtests. Home changed only when analyzed by ethnic groups. The greatest variations were among the peer and school subtest scores each year and the 1975 to 1976 increases accounted for the greatest proportion of the rise in the total scores.

The Edgewood school district's contention (43) that students entered school with negative attitudes and that these grew worse with exposure to school was not upheld. On the total sample, kindergarten and third grade were alike in 1975; kindergarten was significantly higher than first, second, or third in 1976 but the scores remained alike among the latter three, rather than manifesting a decrease. Furthermore, the 439 students who repeated the administrations had increased mean scores: K→1, 1→2, 2→3, 3→4.

The experimental program designed a series of activities which were purported to help improve students' attitudes: teacher interpersonal style, teacher-pupil interaction, personalized instruction, and the creation of curricular materials relevant to Mexican Americans and life in San Antonio. No systematic effort to do these same things was present in the comparison schools. The PSAS means increased for all three experimental schools and for the experimental group from 1975 to 1976 and the gains were all significant ($p<.01$). The comparison schools, 5 and 6, also gained numberically although the increase for school 5 was not statistically significant. The comparison group mean was numerically but not statistically higher than the experimental group in 1975. Comparison group data were, however, significantly ($p<.05$) higher than experimental in 1976. The PSAS evidence, then, did not show increased attitude scores for the experimental affect program when contrasted with the scores of the comparison students.

The 1975 Spanish Version Results

The design for the 1975 administration of the Spanish instrument was to test every student in the bilingual K-3 classrooms of the experimental and comparison schools. Third grade, however, was engaged in another activity and could not be tested. Allowing a one week period to test absentees, the final K-2 sample approached 92% of the target group. A few were discarded because of totally uniform response. Relatively high absenteeism caused an additional portion of the loss.* Two schools from other districts also participated.

Group and School Comparisons

Grouping the schools into experimental, comparison, and other districts gave again a significance of $p<.001$. (Table 33) Experimental and comparison were not statistically different but both were significantly higher than the other district group.

Table 33: Analysis of Variance: 1975 Spanish Total Mean Scores by Group

Source	df	SS	MS	F	p
Between Groups	2	16029	8014.50	15.13	.001
Within Groups	552	292421	529.75		
Total	554	308450			
Group	**N**		**Mean**	**sd**	
Experimental	180		143.71	23.69	
Comparison	230		145.97	21.52	
Other Districts	145		132.94	24.43	
Total	555		141.83	23.60	

The six schools used in the overall analysis varied a great deal in the total mean scores, ranging from a low of 129.91 for school 8 to a high of 147.21 for school 5. (Table 34) The analyses of variance showed a $p<.001$ significance. The four schools from the district on which this study was focused clustered in the mid 140s.

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*Most of the losses were from experimental school 4, resulting in low Ns for K and 1. This school was included in the second grade analyses but not in those of kindergarten and first.

Table 34: Analysis of Variance: 1975 Spanish Total Mean Scores by School

Source	df	SS	MS	F	p
Between Schools	5	18129	3625.80	6.86	.001
Within Schools	549	290321	528.82		
Total	554	308450			
School	N		Mean	sd	
1	48		144.27	25.94	
2	132		143.50	22.92	
5	121		147.21	23.91	
6	109		144.60	18.53	
7	64		136.78	24.28	
8	81		129.91	24.26	
Total	555		141.83	23.60	

All four subtests were significantly different by group and by school. (Table 35) Experimental and comparison were not different but they were significantly higher than the other districts. School 1 was high in the peer subtest; school 5 in the school and home sections; schools 1 and 6 were about equally high in community.

Table 35: Comparison of 1975 Spanish Subtest Mean Scores by School and Group

		Subtest Means			
School	N	Peer	School	Home	Community
1	48	38.04	36.50	34.44	35.29
2	132	37.03	36.57	35.80	33.89
5	121	37.85	37.92	36.31	35.53
6	109	37.29	36.50	35.07	35.59
7	64	34.56	34.97	34.39	32.55
8	81	33.53	31.88	32.60	31.90
F		6.12	8.52	3.54	4.31
p		.001	.001	.004	.001
Experimental	180	37.30	36.55	35.43	34.27
Comparison	230	37.59	37.14	35.72	35.56
Other Districts	245	33.99	33.24	33.39	32.19
F		14.31	16.27	5.85	9.98
p		.001	.001	.003	.001
Total	555	36.55	35.93	35.02	34.26

Examining each grade separately across groups and schools did not produce uniform results (Table 36). School 2 was highest in kindergarten and the difference among schools was significant. Experimental was statistically higher than comparison and other districts for kindergarten. School 5 was highest at first and comparison was significantly above the other districts group for that grade. School 6 was highest in second grade but the difference by school was not significant; the difference by group was not highly significant (p<.05).

Table 36: Comparison of 1975 Spanish Total Mean Scores by Grade by School and Group

School/Group	Grade Means		
	K	1	2
1	148.23	142.07	139.36
2	155.79	147.41	135.97
4	*	*	134.87
5	146.48	152.38	142.41
6	143.40	144.69	145.18
7	129.86	136.41	144.80
8	125.81	133.28	130.27
F	5.45	3.01	1.99
p	.001	.012	.067
Experimental	151.73	146.07	136.21
Comparison	145.29	148.68	143.89
Other Districts	127.67	134.63	136.59
F	12.92	6.01	3.09
p	.001	.001	.046
Total	141.51	144.28	139.29

*School 4 was not included in these analyses.

Even though the pattern was uneven when school and grade was examined, it was still quite similar to that found in English: K was highest in school 1; K and first were not significantly different from each other in school 2 but were higher than second. Third was significantly highest in schools 6 and 7; school 8's first grade was highest. An exception to the English results was found in school 5, where a switch from K highest to first highest occurred.

Grade Comparisons

When analyzing the three grades without taking other factors into account, there was no significant difference. (Table 37) First was highest with a mean of 144.28, but the lowest mean was only five points below that. This was a definite change from the English administrations in which grade was a strong differentiating variable.

Table 37: Analysis of Variance: 1975 Spanish Total Mean Scores by Grade

Source	df	SS	MS	F	p
Between Grades	2	2586	1293.00	2.32	.097
Within Grades	567	316715	558.58		
Total	569	319301			

Grade	N	Mean	sd
Kinder	154	141.51	25.39
First	201	144.28	23.99
Second	215	139.29	21.94
Total	570	141.65	23.69

Of the four subtests, only school varied significantly by grade. First grade was highest; second was lowest. (Table 38) The pattern was the same as that for the total scores.

Table 38: Analysis of Variance: 1975 Spanish School Subtest Mean Scores by Grade

Source	df	SS	MS	F	p
Between Grades	2	564	281.88	5.68	.004
Within Grades	567	28150	49.65		
Total	569	28713			

Grade	N	Mean	sd
Kinder	154	35.68	7.25
First	201	37.07	6.67
Second	215	34.75	7.24
Total	570	35.82	7.10

As expected from these data, ANOVAs examining school and grade variables showed a significant school main effect ($p < .001$) but no significant grade main effect nor interaction effect. The means, shown in Table 39, demonstrate the unevenness of the results. Kindergarten was high in schools 1 and 2.

Table 39: 1975 Spanish Total Mean Scores by School by Grade

School/Grade	N	Mean	sd
1	48	144.27	25.94
Kinder	22	148.23	24.13
First	15	142.07	24.17
Second	11	139.06	32.46
2	32	143.50	22.92
Kinder	19	155.79	21.87
First	54	147.41	22.85
Second	59	135.97	20.96
5	121	147.22	23.91
Kinder	40	146.48	24.97
First	42	152.38	23.14
Second	39	142.41	23.12
6	109	144.60	18.53
Kinder	25	143.40	24.11
First	39	144.69	18.42
Second	45	145.18	15.20
7	64	136.78	24.28
Kinder	22	129.86	19.56
First	22	136.41	30.10
Second	20	144.80	20.20
8	81	129.91	24.26
Kinder	26	125.81	25.42
First	29	133.28	24.72
Second	26	130.27	22.85
All Schools	555	141.83	23.60
Kinder	154	141.51	25.39
First	201	144.28	23.99
Second	200	138.87	22.90

First grade had the highest school subtest mean score in schools 5 and 8, second in 6 and 7. The three grades, K-2, clustered closely together in school 6, with less than two points separating high and low. In contrast, 20 points separated the school 2 extremes for the school subtest. The ANOVA of group and grade variables likewise showed no significant main nor interaction effect for grade but there was a significant group main effect.

Comparisons by Ethnicity

No significant differences were found on any subtest nor on the total score when examined by ethnicity. This held true when the Mexican American mean (141.37) and Anglo mean (147.44) were analyzed, and when that for the nine Blacks (143.00) were added in (only one Oriental took this test).

Mexican Americans' scores varied significantly ($p<.05$) across grades only on the school subtest score: kindergarten 35.58, first 36.86, second 34.85. The few Anglos and Blacks, when distributed by grade, presented cell sizes too small for meaningful analysis.

Comparisons by Sex

The subtest and total Spanish Mean scores were analyzed with all the possible combinations by sex and none was significant. Grade, ethnicity, and sex ANOVAs showed no main effect for any one of these variables nor an interaction effect among them. Group, school, and sex ANOVAs showed main effects for group and school but not for sex.

Summary of the 1975 Spanish Version Results

The experimental and comparison groups' total mean scores were alike on the Spanish version of the PSAS. Both, however, were significantly higher than the other district group's score; 11 points separated them. The total mean scores also varied significantly across schools with more than 27 points difference between the highest school score, a comparison schools, and the lowest, an other district group school. While the variations in the subtests were significantly different for the groups, the numerical spread among them was always less than 3 points. The individual schools, nevertheless, showed greater differences on the subtests: peer 4.5 points, school 6, home 3.4, and community 4.5 points.

Total score calculations on grade alone showed no differences. School and grade analyses, however, showed the largest score variations encountered so far with the highest and lowest s schools' kindergartens separated by 30 points, first grades by 19, and the second grades by 15. One of the other district, small town schools was always lowest but the highest was different for each grade. The differences were quite uniformly spread across the four subtests in this attitude instrument and in about the same proportions as the total scores, that is, the greatest differences were found in the peer and school subtests. Much of the total and subtest differences were due primarily to the higher proportion of Mexican Americans in the other districts group; Mexican Americans differed significantly across schools on the total score and on the school subtest. Sex had no effect on the subtest or total scores.

The 1976 Spanish Version Results

The Spanish instrument was administered to nine schools* in South Texas in 1976 to assess attitudes for that year and to provide data for measuring change, if it had occurred, from 1975 to 1976. All the schools that had participated in any previous Purdue test were able to administer the Spanish version in 1976. The sample classes, all classified as bilingual (including Spanish dominant and intervention in the experimental schools), were drawn to maximize repeated student data from the previous Spanish administration.

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*One school, number 4, had a net usable N of only 6 because of incomplete instruments. All 6 were in second grade. The analyses were done, where applicable, including and excluding this school. In no case did its inclusion change the results.

As with the 1976 English study, the kindergarten children were then in first grade, first was promoted to second, second to third, and the fourth graders who participated in the 1976 English administration were also tested in Spanish.

Group and School Comparisons

Examining the schools via their groupings (experimental, comparison, other) produced a significant difference. (Table 40) The comparison group was statistically higher than the experimental and other districts groups ($p<.001$).

Table 40: Analysis of Variance: 1976 Spanish Total Mean Scores by School Groups

Source	df	SS	MS	F	p
Between Groups	2	17690	8845.00	8.38	.001
Within Groups	404	426208	1054.97		
Total	406	443898			

Groups	N	Mean	sd
Experimental	148	146.19	22.31
Comparison	97	151.91	40.77
Other	162	135.73	34.66
Total	407	143.39	33.07

The two comparison schools, 5 and 6, were significantly higher than the other district schools, with means of 152.18 and 151.53. Two of the other districts schools, 8 and 9, were distinctly lowest with 130.32 and 126.57; the all school mean was 143.39. (Table 41) The others varied considerably but with notable distance between them and the high and low pairs.

The four subtests, when examined by school groupings, did not render statistically significant results. Considering that school 4's influence on the smaller subtest scores might have obscured real differences, it was eliminated. The differences were then slightly more pronounced but not significant.

All four subtests produced statistically differing results by school. The subtest results were generally similar, and a summary, Table 42, was prepared to facilitate scanning the relationships. Comparison school 5 was usually highest and the small town schools, 7, 8, and 9 lowest, although not in every case. School 3, from another district in San Antonio, was numerically higher on the peer and home subtests than comparison school 5 but the differences were not significant.

Table 41: Analysis of Variance: 1976 Spanish Total Mean Scores by School

Source	df	SS	MS	F	p
Between Schools	8	26440	3305.00	3.15	.002
Within Schools	398	417458	1048.89		
Total	406	443898			

School	N	Mean	sd
1	84	146.14	19.79
2	58	147.09	25.83
3	18	148.50	23.19
4	6	138.17	20.98
5	57	152.18	25.32
6	40	151.53	56.31
7	59	141.07	45.90
8	64	130.23	25.54
9	21	126.57	25.22
Total	407	143.39	33.07

Table 42: Summary of 1976 Spanish Subtest ANOVA Results by School

School	N	Peer	School	Home	Community
1	84	38.43	36.37	36.82	34.55
2	58	37.22	36.00	36.95	34.48
3	18	38.89	36.33	38.17	35.11
4	6	39.00	31.17	36.50	36.00
5	57	38.61	39.30	37.65	36.47
6	41	36.90	36.37	35.24	34.12
7	58	35.48	35.41	34.74	32.76
8	64	33.61	31.88	32.45	32.38
9	21	31.62	30.81	33.28	30.62
Total	407	36.63	35.52	35.69	34.00
F		4.881	5.967	3.906	2.163
p		.001	.001	.001	.029

Since not every grade was tested at every school, the schools' mean scores were examined separately by grade to determine the specificity of the differences. The six schools with kindergarten children did not differ significantly.

First grade, present in the samples of five schools, was significantly different (p<.05). (Table 43) School 2's first grade had the high mean with 155.84; school 9, another district, small town school, was low with 126.57.

Table 43: Analysis of Variance: First Grade Spanish Total Mean Scores by School

Source	df	SS	MS	F	p
Between Schools	5	10178	2544.50	2.79	.03
Within Schools	98	89305	911.28		
Total	102	99483			
School	N		Mean	sd	
2	19		155.84	26.78	
5	32		152.41	24.46	
6	9		142.00	18.56	
7	21		134.24	43.06	
8	22		131.91	29.28	
9	21		126.57	25.22	
Total	124		144.05	31.23	

Second grade was not significantly different when examined by school. Only three school samples contained third grade and their mean scores were numerically similar and not statistically different.

Schools' mean scores, then, were different ($p<.01$). First grade contributed a part of this difference ($p<.05$). Kindergarten, second, and third grades were not significantly different by school.

No one grade contributed unusually to the grouping means. None of the calculations of group by grade showed a statistically significant difference.

No grade, when broken down by school, contributed differently from the others on the subtest scores. The relationships among the subtest scores by group remained similar in the grade by grade analyses by school.

In condensed form, then, the 1976 Spanish total and subtest scores varied significantly by school; those from the comparison group were usually higher and two of the other districts group, both small towns, were always lower. The comparison group scored significantly higher than did the experimental. All four subtest scores differed statistically by school, following generally the same pattern as that of the total scores.

Grade Differences

Two important differences were noted in the grade analyses between the 1975 and 1976 Spanish administrations. First, the 1976 kindergarten did not have the highest mean scores on any subtest nor on the total instrument as was the case in 1975. (Table 44) Second, the differences among the grades' scores were not statistically significant on any subtest nor on the total.

Table 44: Summary of 1976 Spanish Subtest and Total Mean Scores by Grade

Grade	N	Mean Scores				
		Peer	School	Home	Community	Total
Kinder	100	36.17	34.67	35.13	33.10	142.39
First	127	35.86	36.24	35.61	34.37	144.05
Second	91	36.85	35.47	34.89	34.12	143.77
Third	89	38.02	35.49	37.22	34.35	146.82
Total	407	36.63	35.52	35.69	34.00	143.39
F		1.36	0.63	1.61	0.49	0.37
p		.25	.64	.17	.75	.84

Third grade had the highest means, numerically, on the peer, home, and total scores. They had generally scored second to kindergarten on the previous administrations of this instrument. Kindergarten was the lowest on school and community in the 1976 Spanish administrations, a reversal of previous trends.

Ethnic Group Differences

The total mean scores by ethnic group showed no statistical difference. (Table 45) The same was true for the school and community subtests. On the peer and home subtests, however, Blacks had the highest scores and Mexican Americans the lowest. The differences were significant.

Table 45: Summary of 1976 Spanish Subtest and Total Mean Scores by Ethnicity

Ethnic Group	N	Mean Scores				
		Peer	School	Home	Community	Total
Mexican American	349	36.19	35.34	35.17	33.76	142.26
Anglo	25	38.48	36.48	37.64	36.00	148.68
Black	21	40.24	37.48	40.10	34.95	152.76
Oriental	12	39.25	35.17	39.00	35.00	148.75
Total	407	36.63	35.52	35.69	34.00	143.39
F		3.42	0.71	5.36	0.89	1.02
p		.017	.55	.001	.45	.39

Caution must be exercised in generalizing from these results. Mexican Americans comprised 85.7% of the sample and the number in each of the other cells was quite small. The trends, however, may have utility for comparisons with other research findings.

Each ethnic group was examined by school and only one, Mexican Americans, was statistically different ($p<.05$) across schools. (Table 46) The means of schools 5 (151.55) and 6 (151.53) were alike and higher than 7 and 8, the small town schools, with means of 138.89 and 130.61.

Table 46: Analysis of Variance: Mexican Americans' Total Mean Scores by School*

Source	df	SS	MS	F	p
Between Schools	5	18417	3683.40	3.01	.012
Within Schools	306	374484	1223.80		
Total	311	392901			

School	N	Mean	sd
1	48	142.92	22.85
2	52	147.52	25.49
5	55	151.55	25.49
6	40	151.53	56.31
7	55	138.89	46.65
8	62	130.61	25.78
Total	312	143.15	35.54

*Schools 3, 4 and 9, all with very small Ns, were included in an analysis that also showed a difference. They were eliminated from this one way ANOVA for more equal comparisons.

ANOVAs calculating school and ethnicity produced $p<.01$ for school as a main effect with no significant main effect for ethnicity nor two way interaction effect. Combining schools into experimental-comparison-other district groupings increased the main effect to $p<.001$. Eliminating Orientals, whose N was very small, did not change the result. Comparing Mexican Americans to Anglos, by school, showed no statistical differences.

Examinations of grade and ethnicity demonstrated no significant differences. Similarly, dropping Orientals, then dropping Orientals and Blacks from the analyses failed to produce statistical significance.

Summarizing, scores examined by ethnicity produced no difference on the total scores. Blacks and Orientals were statistically higher than Mexican Americans and Anglos on the peer ($p<.05$) and home ($p<.001$) subtests. Mexican

Americans scored differently at the several schools with the comparison group highest. School and ethnicity variables yielded only a significant main effect for school; the interaction was not significant. Grade and ethnicity variables were not significant.

Sex Differences

No significant sex differences appeared on any of the subtests nor on the total score. The females' mean scores, although numerically higher on home, community, and total, as compared to males, were not statistically different.

Summary of the 1976 Spanish Version Results

Schools scored significantly different on the subtests and the total, with the two comparison schools generally higher on the subtests and distinctly higher on the total mean. The groups were separated by 10 points on the total and this difference was relatively uniformly spread across the four subtests. Schools varied even more, 25 points, and this, too, was fairly evenly distributed among the subtests. While the comparison group scored significantly higher on the total score than did the experimental and the other district groups, it should be noted that one of the other district schools, in the same metropolitan area as the experimental and comparison schools, scored above the overall mean on the subtests and the total. In an exploratory analysis, the schools were regrouped into urban (schools 1, 2, 3, 4, 5, 6) and small town (schools 7, 8, 9). The urban group was significantly higher ($p<.01$) than small town.

Contrary to some of the other administrations, grade was not a significant factor. Ethnicity was different only for the peer and home subtests with Blacks and Orientals higher than Anglos and Mexican Americans. There was nearly 4 points between them. Much of the difference in the total scores was due to the Mexican Americans in the sample; they varied as much as 21 points among the schools. No difference in total or subtest scores was found for the variable sex.

Comparison of the Spanish Version Results: 1975→1976

Although both years' Spanish administrations had relatively large samples (570 and 407) only 290 students coincided in the two. The loss of some schools and several classrooms, due to uncontrollable circumstances, was the major difficulty. Incomplete instruments was also a factor with four times (about 12%) as many incomplete as on any English test.

The 1975 to 1976 English results showed an increase, although not always significant, during the year. This was not the case for the 1975 to 1976 Spanish means. (Table 47) For the total sample, all categories but one registered gains although only four were significant with the alpha set at .01: schools 5 and 6, comparison group, and Blacks. (The latter had small

Ns and should be taken as tentative.) First grade experienced a very small reduction in means, which was not significant. The all students total sample mean difference between 1975 and 1976 was not significant.

In the calculations using only the students appearing in the two administrations, losses resulted in five categories but none of these was statistically significant. With one exception, school 6, the gains were likewise not significant. The total and repeated student sample means were nearly alike; only one set, school 5 for 1975, showed any important variation.

Table 47: Total and Repeated Student Samples, 1975 and 1976: Spanish Total Mean Scores

	Total Sample			Repeated Students		
Variable	1975	1976	p	1975	1976	p
SCHOOL						
1	144.27	146.14	NS	148.27	149.27	NS
2	143.50	147.09	NS	149.12	146.50	NS
3	*	148.50	*	*	*	*
4	*	138.17	*	*	*	*
5	147.21	152.18	.005	154.02	152.80	NS
6	144.60	151.53	.002	142.38	151.93	.002
7	136.78	141.07	NS	138.19	141.07	NS
8	129.91	130.23	NS	130.98	130.23	NS
9	*	126.57	*	*	*	*
GROUP						
Experimental	143.71	146.19	NS	148.82	147.45	NS
Comparison	145.97	151.91	.008	149.22	151.91	NS
Other Districts	132.94	135.73	NS	134.44	135.43	NS
GRADE						
Kindergarten	141.51	142.39	NS	147.07	144.41	NS
First	144.28	144.05	NS	139.99	144.20	NS
Second	139.29	143.77	NS	140.01	143.83	NS
Third	*	146.82	*	*	*	*
ETHNICITY						
Mexican American	141.37	142.26	NS	141.86	143.05	NS
Anglo	147.44	148.68	NS	157.89	159.89	NS
Black	143.00	152.76	.003	*	*	*
Oriental	*	148.75	*	*	*	*
SEX						
Male	141.01	144.05	NS	142.37	142.75	NS
Female	142.31	142.78	NS	142.86	144.70	NS
ALL STUDENTS	141.83	143.39	NS	142.59	143.65	NS

*Not tested or Ns too small for meaningful analysis.

Schools continued to differ significantly. The comparison group had the highest score in both 1975 and 1976. In 1975, however, the difference over experimental was not statistically significant; it was in 1976. In both cases comparison was significantly higher than the other district group. Comparison gained ($p<.01$) during the one year interval; experimental did not gain significantly. The experimental program students' means were not higher than comparison's nor did they gain more.

The Spanish mean scores by grade were not significantly different in 1975 or 1976. There were some school and grade interaction effects and the differences were always due to the low scores of the other district, small town schools, particularly in kindergarten. Point differences reached 25 on the total score and were rather uniformly from 6 to 8 on the subtests. Ethnicity was not a consistently differentiating factor when viewing the scores for both years together. Sex was not a significant variable in any of the analyses.

Comparison of the Results of the English and Spanish Versions

The development of the Spanish instrument was predicated on concerns for language bias in testing, particularly in the affective domain, in which language fluencies may be inextricably related to answering questions about attitude. The Spanish version was administered, therefore, to the students in the classes considered by the schools to be bilingual. Teachers were allowed to exclude any child who in their judgment did not comprehend enough Spanish to understand the items; only 14 students were excluded in the first administration, none in the second.

The principal task for this part of the research was to determine whether the target sample answered alike or differently in the two languages. Additionally, if portions of the sample answered differently, a second task was to describe this sample and its resultant attitudes. The English and Spanish administrations were compared by year since changes in attitude could have occurred.

Total Sample and Repeated Student Comparisons

In 1975, the total sample's English mean score was 140.78 and the Spanish was 141.65. (Table 48) The repeated student measure gave 144.28 for English and 144.31 for Spanish. Neither showed a significant difference. In comparing total and repeated student samples, English to Spanish, the mean scores for all the variables (group, school, grade, ethnicity, and sex) were alike for English and Spanish with the single exception of the total sample's first grade, in which Spanish was significantly higher than English. There was no significant difference, however, on the first grade repeated student measure.

Table 48: 1975 Total and Repeated Student Samples' English and Spanish Total Mean Scores

	Total Sample			Repeated Students		
Variable	English	Spanish	p	English	Spanish	p
SCHOOL						
1	140.01	144.27	NS	145.29	146.80	NS
2	139.82	143.50	NS	146.28	145.78	NS
4	140.09	134.87	NS	133.68	138.18	NS
5	143.10	147.21	NS	151.23	151.17	NS
6	143.34	144.60	NS	148.74	147.41	NS
7	138.21	136.78	NS	138.52	137.95	NS
8	131.67	129.91	NS	130.03	131.07	NS
GROUP						
Experimental	139.96	143.03	NS	146.01	146.07	NS
Comparison	143.21	143.95	NS	150.14	149.52	NS
Other Districts	134.63	132.94	NS	133.84	134.15	NS
GRADE						
Kindergarten	143.87	141.51	NS	144.69	146.13	NS
First	139.07	144.28	.008	138.85	140.24	NS
Second	138.17	139.29	NS	133.83	134.15	NS
Third	142.74	*	*	*	*	*
ETHNICITY						
Mexican American	140.19	141.37	NS	142.91	143.06	NS
Anglo	145.75	147.44	NS	148.81	152.11	NS
Blacks	143.40	143.00	NS	156.06	150.50	NS
Orientals	145.52	*	*	*	*	*
SEX						
Male	140.20	141.01	NS	142.97	143.78	NS
Female	141.38	142.31	NS	145.69	144.87	NS
ALL STUDENTS	140.78	141.65	NS	144.28	144.31	NS

*Ns too small for analysis or not tested.

The 1976 total mean scores varied more among the variables in each language than those in 1975. These differences were also reflected in the 1976 English-Spanish comparisons. (See Table 49.) The total sample means were: English 146.67, Spanish 143.39. For the repeated student sample, these were both reduced numberically: English 142.63, Spanish 141.44. There was no statistical difference between English and Spanist on either measure. Three variables showed significant differences on both measures:

- School 9 was higher in English than in Spanish.
- The other districts group, in which school 9 was included, was higher in English than in Spanish.
- Kindergarten was higher in English than in Spanish.

While school 9 was a part of the other district group difference, it did not affect kindergarten because no school 9 youngsters were in that sample.

Table 49: 1976 Total and Repeated Student Samples' English and Spanish Total Mean Scores

	Total Sample			Repeated Students		
Variable	English	Spanish	p	English	Spanish	p
SCHOOL						
1	144.34	146.14	NS	143.55	145.78	NS
2	147.23	147.09	NS	146.18	146.89	NS
3	145.79	148.50	NS	155.40	153.60	NS
4	147.12	138.17	.010	145.40	141.12	NS
5	145.77	152.18	.010	146.09	150.16	NS
6	154.96	151.53	NS	152.36	150.31	NS
7	*	141.07	*	*	*	*
8	*	130.23	*	*	*	*
9	136.86	126.57	.006	137.05	126.57	.006
GROUP						
Experimental	145.93	146.19	NS	143.55	145.78	NS
Comparison	150.95	151.91	NS	148.09	148.90	NS
Other Districts	144.82	135.73	.007	140.58	131.77	.005
GRADE						
Kindergarten	153.44	142.39	.001	138.04	128.35	.006
First	143.82	144.05	NS	140.11	141.72	NS
Second	143.32	143.77	NS	144.20	146.40	NS
Third	144.19	146.82	NS	145.16	145.27	NS
ETHNICITY						
Mexican American	145.19	142.26	NS	140.06	135.68	NS
Anglo	145.81	148.68	NS	140.40	145.60	NS
Black	151.07	152.76	NS	151.88	151.65	NS
Oriental	152.37	148.75	NS	141.20	147.00	NS
SEX						
Male	145.92	144.05	NS	142.10	142.93	NS
Female	147.29	142.78	NS	143.14	140.02	NS
ALL STUDENTS	146.67	143.39	NS	142.63	141.44	NS

There were two other total sample differences, not sustained on the repeated student sample:

- School 4 was higher in English.
- School 5 was higher in Spanish.

School 4 was an experimental school from which a high proportion of the Spanish administration instruments were lost to the research because of items left blank. School 5 was a comparison school.

The subtest scores followed the same pattern in both languages and were similar to the pattern for the total scores. The Spanish peer score was frequently numerically, but not significantly, higher than in English.

Item Mean Score Differences

One further investigation was conducted to determine where any variation lay: each item was inspected for significant differences, via ANOVAs, for each of the variables, and examined for its effect. There were no significant item mean score differences by ethnicity. Three sex differences occurred on English items: females were significantly higher than males on: Peer 18, School 16, and Home 7. There were group differences on English Home item 7 and Spanish items: Peer 27 and Home 4. There is some implication of achievement in all but two of the items with sex and group differences but there were many others with that same motive in which no significant differences occurred.

Table 50: Summary of 1975 English and Spanish Significant ($p<.05$) Differences by School and Grade

Item		Differentiating Variable			
		School		Grade	
		English	Spanish	English	Spanish
Peer	6			3rd high	
	15	Sch. 8 low		3rd high	
	18				
	22	Sch. 8 low	Sch. 8 low		
	27	Sch. 8 low	Schs. 7,8 low		
	33				2nd low
	39		Schs. 1,4 low	K high	K high
Sch.	12	Schs. 4,8 low	Sch. 8 low	K high	
	16			3rd high	
	19				1st low
	21	Sch. 8 low	Sch. 8 low		
	25		Sch. 8 low	K high	
	31	Sch. 8 low	Sch. 8 low	K high	
	34		Sch. 4 low		1st high
	37		Schs. 4,7,8 low		
Home	4	Sch. 8 low	Schs. 7,8 low	3rd high	
	7	Schs. 7,8 low		3rd high	
	13			K high	
	24	Sch. 8 low	Sch. 8 low	K high	
	38		Sch. 8 low		
Comm.	3	Sch. 8 low			
	5	Sch. 8 low	Schs. 1,8 low		
	23			K high	
	32		Schs. 4,7 low		
	35			3rd high	
	40	Sch. 8 high	Sch. 7 low	K high	K high

Twelve English items produced significant differences when examined by school: in eleven of these, school 8 was significantly lowest or was one of two schools that were significantly lower (in one case, school 8 was accompanied by school 4, in another by school 7). (Table 50) School 8 was the highest on item 40, one in which neighbors are talking about "kids." Content examination exhibited no special pattern. There were more school differences in Spanish: fifteen. In ten of these, school 8 was lowest or one of the significantly lower ones. School 7 was low on five items, school 4 on three. Six of the items implied achievement; school 8 was low on five of them. The other items had varied content.

The school differences were characterized by one school being significantly lower than the others, usually school 8; only two, one in each language, had a school significantly higher than the others. The opposite occurred on the grade analyses. In fourteen English items there were significantly different high grades: on eight items kindergarten was the high grade; on six, third grade was high. Only four Spanish items were different by grade: kindergarten was high twice; first high on one and low on another; second was low on one. Third grade was not tested in Spanish in 1975; that might have changed the number of significant differences. Content examination showed no discernable pattern in the English or Spanish item analyses by grade.

The consistency of the item differences with the patterns of subtest and total scores is notable. School was a significantly differentiating variable in almost every analysis with school 8 usually lowest. Language of reply made little difference. The pupils in that small town saw the social environment as less positive than did those elsewhere in the study. English item differences by grade, with K or 3 highest, also supported the general findings. In general, both the school and grade differences were quite uniform due to certain items rather than to minor variations scattered throughout the instrument.

Summary of English-Spanish Comparisons

Summarizing the English-Spanish comparisons, the following general trends were discovered:

1. The 1975 English and Spanish PSAS versions' scores were alike.
2. The 1976 English and Spanish scores were generally alike but some differences emerged:
    - School 9 was lower in Spanish than English.
    - The other districts group was lower in Spanish.
    - Kindergarten was lower in Spanish.

    Except for these variations, the point spreads among the English and Spanish scores remained in proportion, that is, differentials found for any variable were quite stable.
3. The 1975 item analyses by language tended to

follow the same pattern as the total scores, generally confirming the school and grade differences.

Most of the bilingual children, then, tested about alike in either language. Some caution must be urged, however, as "bilingual" is a relative term as it was used in the schools. Kindergarten is a good example; these youngsters scored significantly higher in English. School 8 is another important example, where despite an eight-year, reputedly high quality bilingual education program, a considerable numerical and statistically significant difference favored the English version PSAS scores.

Texas and Indiana Comparisons

Summarized data from an urban Indiana English administration of 381 first, second, and third grade pupils were provided by the instrument author, Dr. Victor G. Cicirelli.* To help establish the relative position of the Texas group (experimental, comparison, and other districts combined), their scores were compared. First grade in Indiana scored between the Texas English and Spanish total mean scores and the differences were probably not significant. (Table 51) These differences were not uniformly distributed across the subtests. The second grade scores were similar. About six points higher than the Texas English mean. In third grade, Indiana and Texas scored alike.

Table 51: Comparison among Indiana English, Texas English, and Texas Spanish Subtest and Total Means Grades 1-3: 1975

Test	First Grade Means			Second Grade Means			Third Grd. Means	
	Indiana English	Texas English	Texas Spanish	Indiana English	Texas English	Texas Spanish	Indiana English	Texas English
	N=105	N=439	N=201	N=141	N=432	N=215	N=135	N=388
Peer	35.86	36.43	37.02	36.36	36.08	36.28	36.87	37.11
School	35.19	34.84	37.05	35.89	34.48	34.75	34.52	35.55
Home	35.30	34.30	35.01	35.71	34.31	34.54	35.12	35.33
Comm.	35.57	33.42	34.68	36.14	33.24	33.63	36.07	34.58
Total	141.90	139.07	144.28	144.12	138.17	139.29	142.58	142.74

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*The Indiana data were summarized and not available case by case. Tests for significance, therefore, could not be performed.

As with the Texas data, Indiana sex differences were low and did not appear to be significant. The Indiana means by sex were somewhat higher than the Texas means when broken down by grade, but not always. (Table 52) The two state sample means appeared very much alike regardless of sex.

Direct comparisons between ethnic groups in the two states were possible only on Blacks and Anglos. Scores on Black pupils in the Texas sample were lower on first grade, higher on second, third, and total, but the differences did not appear significant. (Table 53) Scores for Anglo students in Texas were slightly higher than for Anglo students in Indiana on first, third, and total scores, again of doubtful statistical significance. No Mexican Americans or Orientals were reported in the Indiana sample, it should be noted.

Table 52: Comparisons among Indiana and Texas English Subtest and Total Mean Scores by Grade and Sex: Spring 1975

Grade and Test	Indiana						Texas					
	Male		Female		Total		Male		Female		Total	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Kinder.							161	142.27	200	145.17	361	143.87
Peer							161	36.59	200	37.29	361	36.98
School							161	35.83	200	36.95	361	36.45
Home							161	34.93	200	35.79	361	35.41
Comm.							161	34.93	200	35.20	361	35.08
First	51	139.28	54	144.37	105	141.90	216	137.84	223	140.27	439	139.08
Peer	51	35.63	60	35.06	118	35.86	216	36.03	223	36.81	439	36.43
School	53	35.13	59	35.24	112	35.19	216	34.54	223	35.14	439	34.84
Home	52	34.42	61	36.05	113	35.30	216	34.15	223	34.44	439	34.30
Comm.	52	34.71	61	36.30	113	35.57	216	33.10	223	33.72	439	33.42
Second	75	144.45	66	143.74	141	144.12	238	138.38	194	137.92	432	138.17
Peer	81	36.17	66	36.59	150	36.36	238	36.21	194	35.92	432	36.08
School	80	36.24	68	35.48	148	35.89	238	34.64	194	34.28	432	34.48
Home	80	36.00	68	35.67	148	35.71	238	34.23	194	34.41	432	34.31
Comm.	78	36.33	68	35.93	146	36.14	238	33.07	194	33.45	432	33.24
Third	75	141.63	60	143.77	135	142.58	205	143.16	183	142.27	388	142.74
Peer	75	36.28	61	37.59	138	36.87	205	37.15	183	37.08	388	37.11
School	80	33.97	68	35.20	137	34.52	205	35.81	183	35.26	388	35.55
Home	76	35.08	62	35.18	138	35.12	205	35.43	183	35.22	388	35.33
Comm.	78	36.12	68	36.02	138	36.07	205	34.46	183	34.71	388	34.58
Total	201	142.09	180	143.94	381	142.96	820	140.20	800	141.38	1620	140.78

Table 53: Comparisons among Indiana and Texas English Subtest and Total Mean Scores by Grade and Ethnicity: Spring 1975

Grade and Test	Indiana		Texas		Indiana		Texas		Texas		Texas		Indiana		Texas	
	Black		Black		Anglo		Anglo		Mex. Am.		Oriental		Total		Total	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Kinder.			17	144.06			19	146.05	319	143.76	6	142.50			361	143.86
Peer			17	36.35			19	38.47	319	36.90	6	38.17			361	36.98
School			17	35.77			19	37.32	319	36.47	6	34.67			361	36.45
Home			17	36.88			19	35.16	319	35.36	6	34.50			361	35.41
Comm.			17	35.00			19	35.11	319	35.08	6	35.17			361	35.08
First	68	138.90	16	141.63	37	147.24	28	150.07	391	138.04	4	153.25	105	141.90	439	139.08
Peer	73	35.22	16	39.94	38	37.08	28	38.96	391	36.21	4	41.75	118	35.86	439	36.43
School	75	34.82	16	36.94	37	35.92	28	36.89	391	34.58	4	37.50	112	35.19	439	34.84
Home	75	34.44	16	34.69	38	37.00	28	37.07	391	34.03	4	39.50	113	35.30	439	34.30
Comm.	76	34.67	16	34.06	37	37.40	28	36.07	391	33.19	4	34.50	113	35.57	439	33.42
Second	89	145.52	17	139.18	52	141.73	27	140.56	386	137.99	2	133.50	141	144.12	432	138.17
Peer	93	36.59	17	36.47	54	35.96	27	37.22	386	36.03	2	26.50	150	36.36	432	36.08
School	95	35.99	17	34.94	53	35.72	27	34.48	386	34.47	2	32.00	148	35.89	432	34.48
Home	94	36.00	17	35.00	54	35.20	27	35.00	386	34.21	2	39.00	148	35.71	432	34.31
Comm.	94	36.72	17	32.77	52	35.10	27	34.07	386	33.19	2	36.00	146	36.14	432	33.24
Third	88	142.09	22	147.46	47	143.49	34	146.15	321	141.93	11	146.55	135	142.58	388	142.74
Peer	88	36.56	22	38.46	48	37.44	34	38.71	321	36.85	11	37.09	138	36.87	388	37.11
School	88	34.45	22	36.55	49	34.63	34	35.50	321	35.45	11	36.73	137	34.52	388	35.55
Home	88	34.93	22	37.14	50	35.46	34	36.03	321	35.08	11	36.91	138	35.12	388	35.33
Comm.	88	36.15	22	33.96	50	35.94	34	35.91	321	34.44	11	35.82	138	36.07	388	34.58
Total	245	142.47	72	143.40	136	143.84	108	145.75	1417	140.19	23	145.52	381	142.96	1620	140.78

Attitude researchers specializing in sociometry have generally used the approach taken in this study, that of determining statistically significant differences between and among groups of scores. Many attitude theorists, however, do not agree that this method is of the greatest utility in the assessment of sample and/or individual differences. They argue that attitudes toward specific elements within a situation or system aggregate to give direction, positive or negative, and intensity of behavior. These theorists, therefore, frequently utilize groupings of standardized scores to describe a sample's attitudes relative to others.

Three primary score groups are found in the literature: deciles, quartiles, and stanines. The first two appear to be decreasing in present studies. Stanines, based on the normal curve, are most frequently employed in educational measurement. Achievement, self concept, and motivation scores are provided in stanine form for the instruments and are urged as more useful counseling and programming measures than are the raw scores or percentages. (35, 38, 81)

To facilitate the education practitioner's comparisons with other measures, the raw subtest and total scores were grouped into tentative stanines based on the 1975 Texas English administration. The data for conversion to stanines and the procedures were presented in a previous report (64).

From the tentative summary stanine chart (Appendix B), the total mean scores for all available variables across years, language versions, and states were expressed in stanines. The major findings from the raw score analyses were supported. (Table 54)

The comparisons by schools did not change appreciably:

1. There were differences among schools, about as the raw score analyses had shown, ranging from a stanine of 4, generally for schools 8 and 9, to highs of stanine 6 for some.
2. The principal school changes were from lower stanines in 1975 to higher in 1976: schools 2, 4, 6.
3. Schools 4 and 9 scored higher in English; school 6 in Spanish.

The school grouping results by stanines were also similar to their raw scores:

1. The experimental group remained stable at the norm stanine of 5.
2. Comparison improved from a stanine of 5 in 1975 to a 6 in 1976 in both languages.
3. The other districts group varied somewhat but stayed generally lower than experimental or comparison.

Most of the grade analyses were calculated at the norm stanine of 5. The exceptions were a one stanine rise from 5 to 6 for kindergarten in English and third in Spanish.

Table 54: Summary of Total Mean Scores Expressed in Stanines, 1975, 1976; English, Spanish; Texas, Indiana

Variable	Stanines				
	1975 Texas English	1976 Texas English	1975 Texas Spanish	1976 Texas Spanish	1975 Ind. English
SCHOOL					
1	5	5	5	5	
2	5	6	5	6*	
3		5		6	
4	5	6*	4*	5	
5	5	5	6*	6	
6	5	6	5	6	
7	5		5	5	
8	4		4	4	
9		5		4	
GROUP					
Experimental	5	5	5	5	
Comparison	5	6	5	6	
Other Districts	4**	5	4	4**	
GRADE					
Kindergarten	5	6	5	5	
First	5	5	5	5	5
Second	5	5	5	5	5
Third	5	5		6*	5
ETHNICITY					
Mexican American	5	5	5	5	
Anglo	5	5	6*	6	5
Black	5	6	5	6	5
Oriental	5	6		6	
SEX					
Male	5	5	5	5	5
Female	5	6*	5	5	5
ALL STUDENTS	5	5	5	5	5

*One score point higher than the maximum for the next lower stanine.
**One score point lower than the minimum for the next higher stanine.

Mexican Americans remained at the norm stanine of 5 across years and languages. The relatively few bilingual Anglos scored higher in Spanish than English; Blacks and Orientals scored higher in 1976 than in 1975. The ethnic group data must remain tentative since some numbers were small.

Males scored at stanine 5 across languages and years. Females improved one stanine, barely, on English from 1975 to 1976.

The Indiana students scored at the norm stanine of 5 in the three grades at which they were tested. Their two ethnic components, Anglo (listed as White by Purdue) and Black, were equal at stanine 5, and so were males and females. The norm stanine of 5 resulted when the entire Texas and Indiana samples, and across test languages and years where applicable, were calculated. Texas and Indiana students were alike when viewed as total samples. In the comparable variable categories, some differences between Texas and Indiana were noted but all of these, with the exception of the 1975 Anglo stanine of 6 in Spanish, were between the stanine 5 of Indiana in 1975 and the 1976 stanines of 6 for Texas at third grade, for Anglos, and for Blacks. Since Indiana data for 1976 were not available and the Texas Anglo and Black sample sizes were much smaller than Indiana's, no importance could be attributed to the differences.

In general, then, the mean scores of the Texas and Indiana samples were much alike. Some grade and ethnicity differences were observed but most were probably not significant. Additional samples, in other sites, would have been of value to the overall study. Data on representative samples from other regions, including several ethnic groups, would have been helpful in determining the generalizability of the present findings.

The Attitude Study Summary

This study dealt with the attitudes of the 1975 K-3 children in the sample populations, tested in English and in Spanish. These same samples were retested in 1976 when the students were then in grades 1 through 4. The general results of the administrations were:

1. The total mean scores varied significantly among schools.
2. Some significant differences were found when the schools were grouped: experimental and comparison were usually alike and were almost always higher than the other districts group; on a few measures, comparison was higher than experimental.
3. Grade differences occurred in English but not in Spanish.
4. School and group by grade analyses showed a number of significant differences but these were not uniformly in one group, school, or grade.
5. Mexican Americans were frequently lower than Anglos, Blacks, and Orientals in English but the difference was not always significant.
6. Ethnicity was not a significant factor in Spanish.
7. Mexican Americans differed significantly across schools in English but not in Spanish; the other ethnic groups varied in neither.
8. Ethnicity across grades was rarely significant.

9. Sex was never a significant factor.
10. Overall, the students in this Texas study scored about like those of a 1975 administration by another research team in Gary, Indiana.

Whether the means of the samples in each administration were compared, or whether only students taking any two were taken into account, rarely changed the results even though numerical differences in means were evidenced.

The English scores raised significantly for several categories in the analyses from 1975 to 1976. The Spanish scores generally did not rise appreciably and in a few cases dropped.

Score differentials remained quite stable across languages and the administrations in 1975 and 1976. The rise from 1975 to 1976 was reflected in roughly proportional variations in the scores with only a few minor variations.

Language of administration made little difference for most students. Some were not fluent enough in one language to have been included. This most frequently occurred in those classrooms classified by the districts as bilingual, where some children, although Mexican American, could not manage some of the item concepts in Spanish. Kindergarten was a good example: the students almost always scored significantly higher in English than Spanish.

CHAPTER V: SUMMARY, DISCUSSION, AND RECOMMENDATIONS

The one year study of social attitudes, via the Purdue Social Attitude Scales for Primary Children, Experimental Edition II, in both Spanish and English, was conducted through two administrations in each language. The 1975 English design sample included all children, kindergarten through third grade, in three experimental and two comparison schools in the Edgewood Independent School District, San Antonio, Texas. The 1975 Spanish design was to have included all the children in the English administration who were bilingual English-Spanish.

A followup study, one year later, was conducted to measure any change in attitudes that had occurred. The sampled students were then in grades 1-4. Some losses in sample size and composition were experienced due to unforeseen and uncontrollable school activities. Samples from five schools in other districts were used in the several administrations to determine how prevalent the target district students' attitudes were in South Texas.

The analyses were performed by test language, year, group (experimental, comparison, other districts), school, grade, ethnicity, and sex. Interactions among the variables were also determined.

The classroom teachers and/or aides administered the instruments after orientation by the research staff, who also monitored many classrooms while the children were taking the test. Very few difficulties were noted or reported. The teachers commented that the children "enjoyed" the picture-story format. A few students in all administrations marked every item the same. These were discarded. Also, a few left some items blank in English; many more did in Spanish. These, too, were discarded. The final samples were - 1975: English 1620, Spanish 570; 1976: English 711, Spanish 407.

Overview of the Results

In the study of the Edgewood experimental program versus a comparison group, the latter was generally significantly higher in English but not always so. In Spanish, the two were alike. Experimental and comparison were usually significantly higher than the small town schools in the other districts grouping but not different from a sample of children from another San Antonio district.

Mexican Americans were lower than Anglos, Blacks, and Orientals on one English administration; Mexican Americans and Anglos were lower than Blacks and Orientals on the other. The four ethnic groups were not different in the Spanish administrations. Mexican Americans differed significantly across schools; the other ethnic groups did not. Because of widely varying sample sizes, the ethnic group results must be taken as tentative. Sex was not a significantly differentiating variable on the subtest or total mean scores nor when these were examined by group, school, grade, or ethnicity.

The Texas students, as a whole, scored the same as those from Gary, Indiana. This represented a type of cross validation of the Edgewood findings. In Texas, kindergarten and third grade scored generally alike, with kindergarten higher in some schools, and with first and second lower. Kindergarten was not tested in Indiana; first grade appeared to be statistically higher than third there. School by grade studies in Texas showed significant differences for both in English but these were not uniform across either. Only school was significantly different in Spanish.

When converted to stanines, the data revealed no important differences from those outlined for the raw score differences. Comparison and experimental were alike in 1975; comparison increased in 1976 and experimental did not. Both remained higher than the other districts group. The major rises from 1975 to 1976 remained. The patterns of scores for the Texas and Indiana samples remained alike for 1975.*

Programmatic Inferences

Basing its research on the planning and implementation documents of the Edgewood School Plan, Development Associates approached the attitude studies via specific questions. Each of these spoke to issues raised in the plan and/or in the program formulations for that experimental program.

The Final Plan contended that students started school with negative attitudes and that these worsened with exposure to school. However:

1. The Edgewood kindergarten students in the samples started school with positive attitudes, at or above the norm stanine of 5.
2. Those same kindergarten children, when in first grade, scored numerically higher on mean raw scores and at the same or higher stanine.
3. Although there was a gap in mean raw scores between the K and first grades in 1975, and the difference was significant in the English administration, the stanine was still at the norm

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*Readers interested in an expanded explanation may find it useful to refer to the section summaries provided on pp. 34, 43, 44-46, 52-53, 58-60, 64-65, and 70-71.

of 5 and these 1975 first graders increased their raw scores in 1976, as did all grades.

Neither of the two contentions therefore was upheld from the data collected in this study.

The experimental plan proposed to improve the students' attitudes through several programmatic interventions. However:

1. The experimental group was never higher than the comparison group which did not experience the program activities; the two were usually statistically alike but in some cases comparison was higher than experimental.
2. Students did show increases in their raw score means, and sometimes in stanines, over a one year exposure to the experimental program; however, the comparison students showed equal or slightly greater gains over the same period.

No discernable effect of the experimental program was found from the research data.

The teaching of Spanish, and the use of Spanish in teaching other subjects and in classroom management, were proposed as vehicles for improving students' attitudes in the experimental program. Further, it was proposed that testing the pupils in their home language would reduce language bias and the students would test higher. However:

1. Kindergarten scored higher in English than in Spanish in 1975 and in 1976; most of the other grades scored about alike in the two language versions of the PSAS.
2. The mean score gains in the two languages were about the same, whether expressed in raw scores or stanines.

The likelihood of language bias existing, when applied to the sampled children as a whole, was not upheld from the research data. Bilingual children scored about the same in the two languages but the beginning students, at kindergarten, scored significantly higher in English than in Spanish.

Development Associates raised two additional questions in order to probe the generalizability of the attitudes as measured in the target district. The first of these was approached through attitude measurement of students, primarily Mexican Americans, in other schools in South Texas:

1. Both the comparison and experimental students, and the target district's samples as a whole, scored significantly higher than did those in schools in small towns in South Texas.
2. Neither, however, scored significantly higher, in either language version of the instrument, than did the students from another district in San Antonio where the target district was located.

Further, the students in the South Texas study were compared to those measured in another 1975 study in Gary, Indiana:

1. The overall mean raw scores between the samples in the two states were approximately alike in 1975; they were even more alike when only the urban schools were compared.
2. Although no Mexican Americans were reported in the Indiana study, the South Texas Mexican Americans scored about like the Midwest sample of Anglos and Blacks.

This comparison showed no support for the experimental program's, nor some other practitioners' allegations that Mexican Americans hold negative attitudes toward school. An examination of the Mexican Americans' scores on the 1975 English version, for example, showed their mean of 140 to be about like that for the other ethnic groups in both Texas and in Indiana. Since the total score is composed of the various items intending to measure social attitudes, dividing that mean by the number of items would give an "average" score of 3.50, which would be about half way between "neither happy nor sad" and "somewhat happy." The subtests show about the same relationship as the total scores, thus the Mexican Americans' attitudes towards their peers, the schools they attend, their homes and communities, could not be interpreted as negative. To the contrary, since the instrument designer expected the "happy" ratings to indicate positiveness, these students must be said to hold positive attitudes toward the dimensions included in this social attitude instrument. And reiterating, the Mexican Americans' social attitudes did not vary substantially from those of the other ethnic groups reported in this study.

It is important to note, however, that the measurements via this social attitude instrument found great differences in the attitudes held by students, including Mexican Americans, in the several schools in the study. Total mean score differences of as much as 25 points were discovered, placing those students in the "somewhat unhappy" category when their means were related to the rating scales used for the items.* While the subtests were naturally much reduced, their differences persisted, indicating a need for program intervention, particularly in the social attitudes toward peers and school. Activities designed to enhance the less than positive relationships among the students, and within the school environment, should be attempted.

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*Subsequent research by Antioch College graduates on the differences found the students' explanations for their ratings to be "surprisingly clear and apt." They concluded that the differences were real. Further, correlations between the students' peer subtest scores and sociometric choices for play were high; peer scores and work choices were moderately correlated. School subtest scores and work choices were also moderately correlated. The work of John S. Barton, Jr., Graciela Estringel, Jose Tomas Garcia, Nelson Pena, and Hortensia Serna is gratefully acknowledged.

In summary, although more research is needed on the PSAS, the investigations conducted so far indicate high reliability and substantial validity for this instrument. Practitioners should find the total social attitude scores to be useful for guiding program design and in assisting individual pupils in making the necessary adjustments to the society as delimited by the constructs in the PSAS. The subtests, while showing persistent differences, give score margins that frequently were less than might be expected. It would appear, however, that when students' scores vary widely on any one of the social attitude subtests, attention to that element in the children's life if warranted.

Equally important for practitioners, previous research compared the relationships among the PSAS school and total social attitude scores, self concept and motivation as measured via the Self-Concept and Motivation Inventory, TOBE-CTBS/Q language achievement scores, and teacher assigned grades, and the conclusions were that:

1. Low relationships were discovered among the PSAS social attitude scores, SCAMIn scores, and TOBE-CTBS/Q achievement scores.
2. A high positive relationship was found between PSAS social attitude scores and teacher assigned grades.

Predictability of the PSAS or the SCAMIn scores on standardized language achievement scores were low or negligible. The PSAS did, however, predict grades. (64)

Research Recommendations

The findings reported herein apply primarily to the urban South Texas district that furnished the preponderance of the sample. A limited sample from another district in the same city added generalization credibility to the target district data. Some comparisons with data from Gary, Indiana, were also made; results from the two cities' samples were much the same. Research recommendations for the Purdue included:

1. Mexican Americans and other Spanish speaking samples elsewhere in the nation should be tested in both languages and the findings compared to these from South Texas.
2. Large samples of Anglos, Blacks, and Orientals in South Texas and other areas should be studied.
3. The instrument should be tested with other ethnic groups, particularly native American Indians.
4. The instrument's usefulness should be tested in other geographic areas of the nation.
5. More small town schools, from every geographic area, [illegible] uld be incorporated.

At the same time, the Spanish vocabulary and general comprehension should be examined carefully. The present Spanish version was tailored specifically to South Texas and some important variations might be encountered with other Spanish speaking populations.

Despite these recommendations, this research and the previous instrumentation study (64) suggested, that with the proper precautions in interpreting the results, the Purdue Social Attitude Scales for Primary Children, Experimental Edition II, can serve education practitioners as a general diagnostic tool for assessment of program impact. Individual assessment, tempered with data from other studies, would also appear to have practical value. Further, students who speak Spanish better than English will perform well on that language version and their Spanish scores can be used in conjunction with English dominant students for studies of group attitudes.

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APPENDIX A:

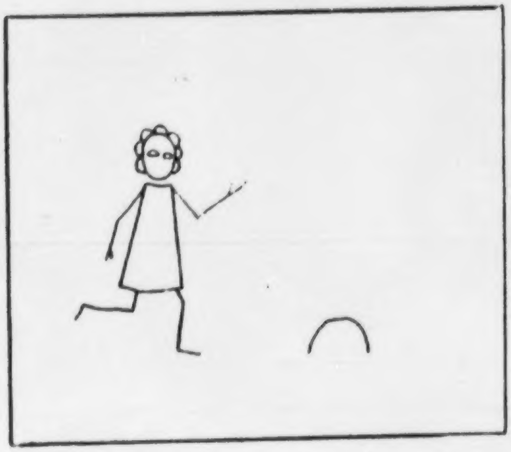
PURDUE SOCIAL ATTITUDE SCALES FOR PRIMARY CHILDREN, EXPERIMENTAL EDITION II,

(English and Spanish legends)

English version by:
Dr. Victor G. Cicirelli

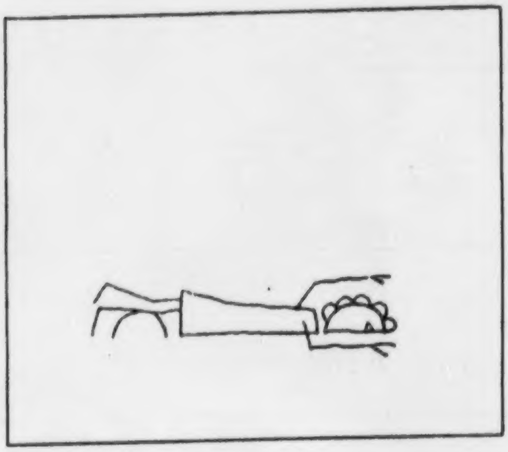
Spanish version by:
Drs. Earl Jones & Robert A. Cervantes

EXAMPLE



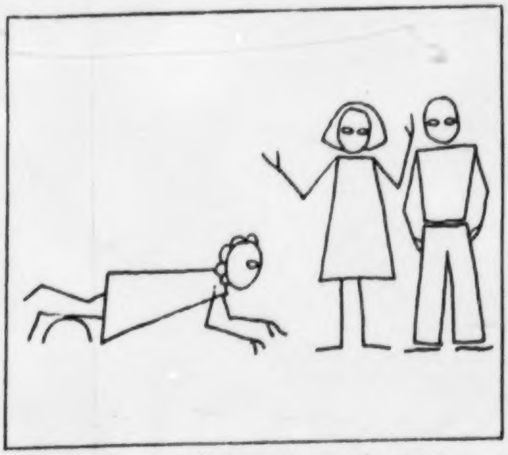
Mary is running.

Maria está corriendo.



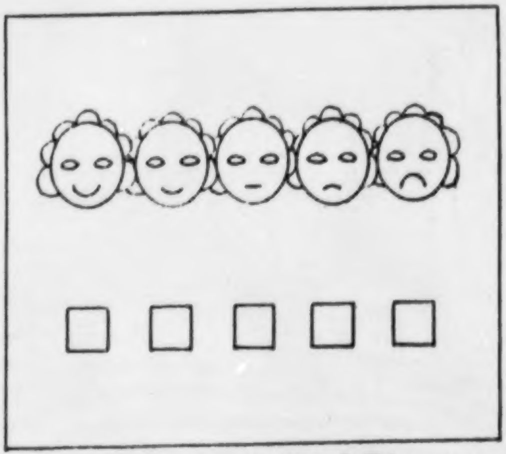
She falls down.

Ella se cayó.



Some other children come to see what happened.

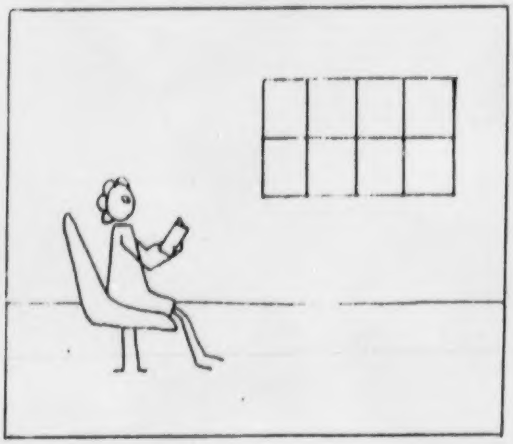
Otros niños vienen a ver lo que pasó.



Which face is Mary's face? Take your pencil and make a mark in the little box under the face you think is Mary's.

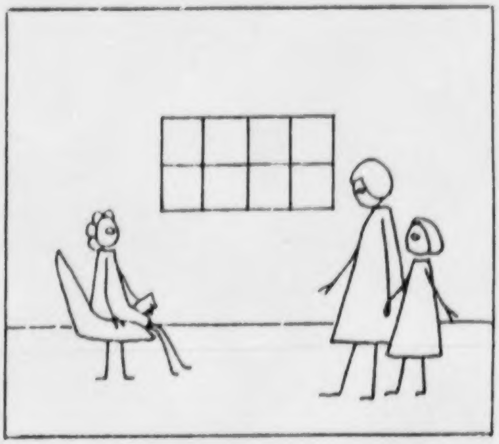
¿Qué cara tiene Maria? Con tu lápiz marca la cara de Maria en el cuadrito.

P- 1



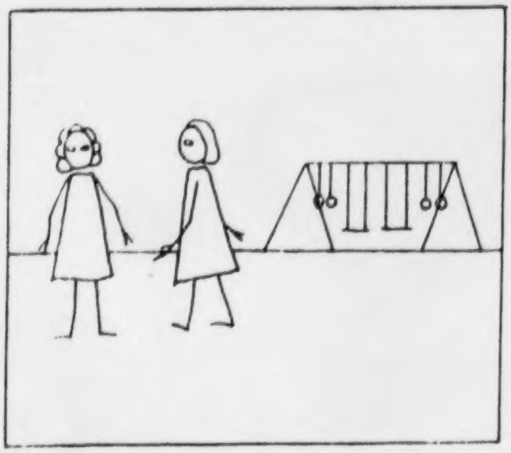
Sally is at school.

Sara está en la escuela.



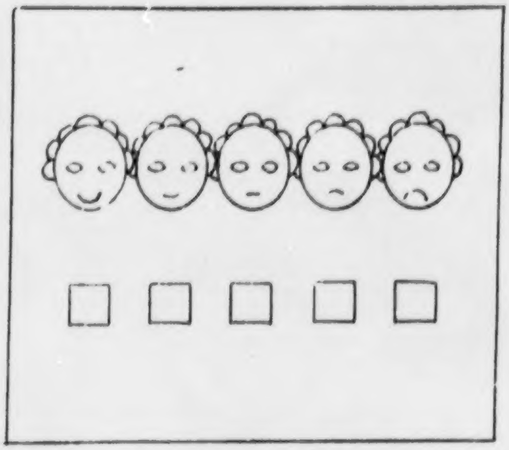
A new girl comes to the class.

Una niña nueva viene a la clase.



At recess, the new girl comes over to Sally.

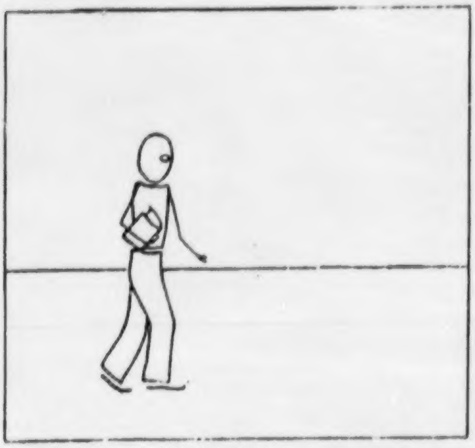
A la hora de recreo la niña nueva va adonde está Sara.



Which one is Sally's face?

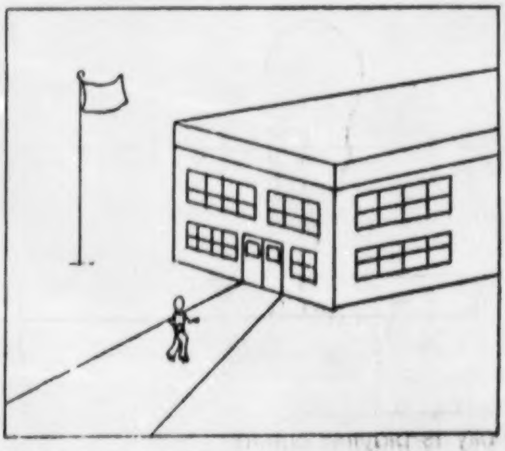
¿Qué cara tiene Sara?

S-2



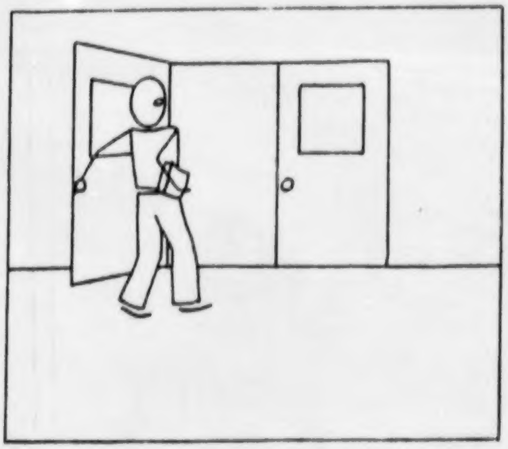
Bobby is on his way to school.

Roberto va a la escuela.



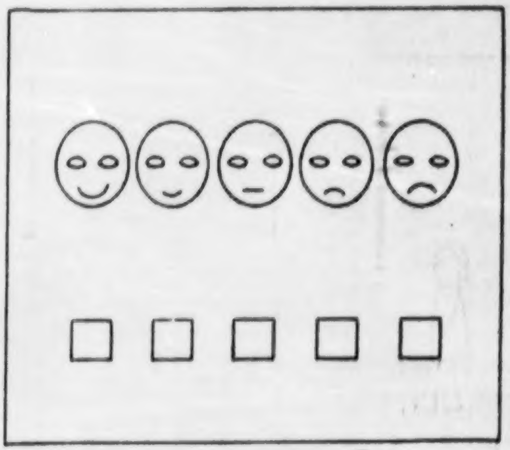
He gets to school.

Llega a la escuela.



He opens the door and goes inside.

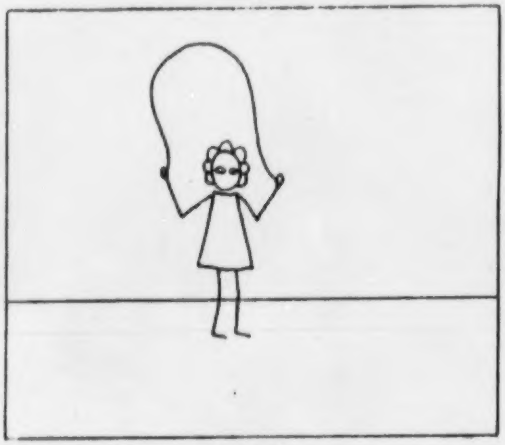
Abre la puerta y entra.



Which one is Bobby's face?

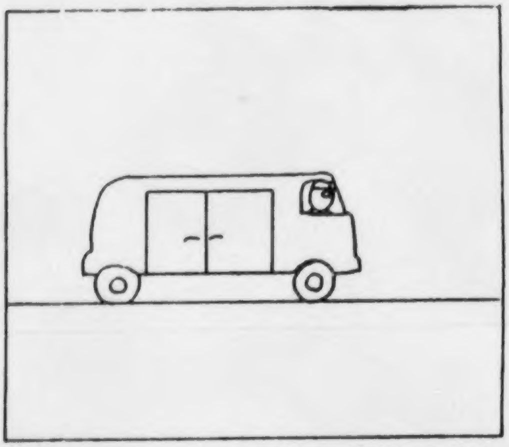
¿Qué cara tiene Roberto?

C-3



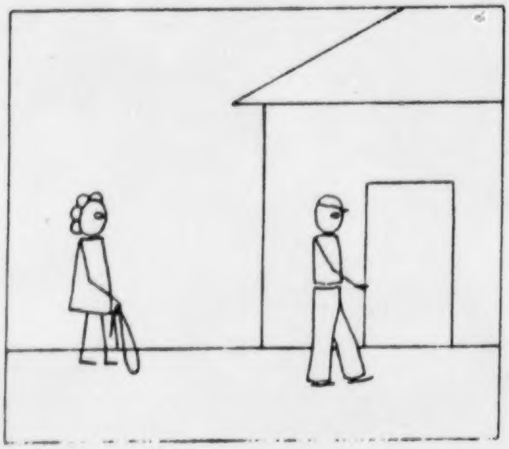
Polly is playing outside.

Paula está jugando afuera.



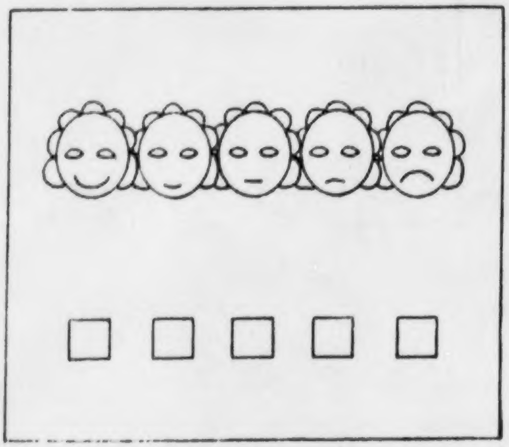
A repairman stops his truck at Polly's house.

Un plomero para su troca en la casa de Paula.



Polly sees him go to her door

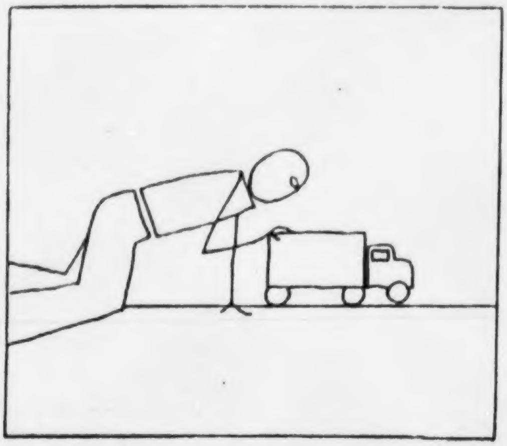
Paula lo ve ir a la puerta.



Which one is Polly's face?

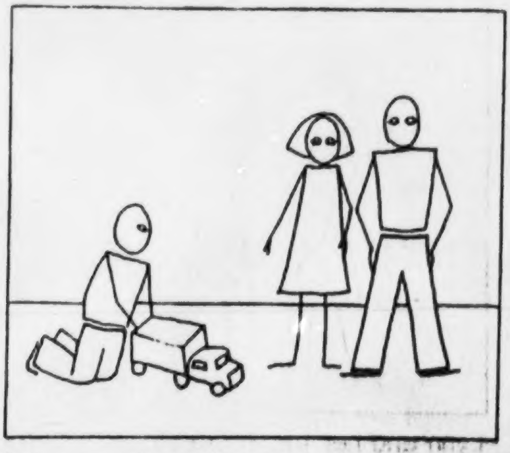
¿Qué cara tiene Paula?

H- 4



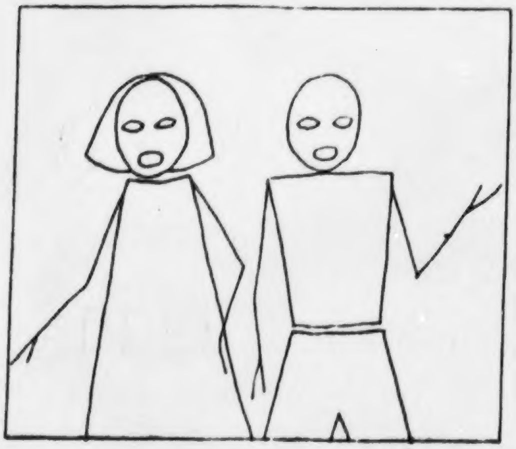
Joe is playing at home.

José está jugando en su casa.



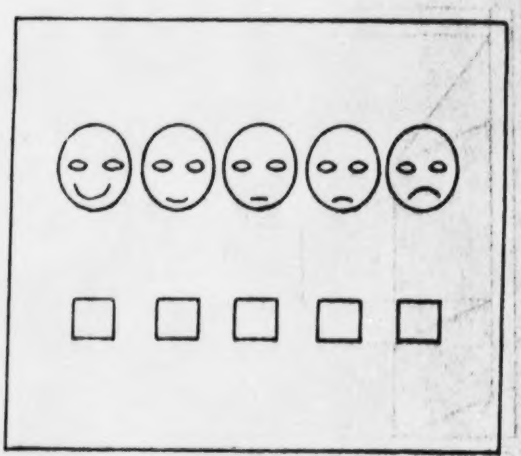
He sees his brother and sister coming.

Ve que viene su hermano y hermana.



They say, "Joe, can we play too?"

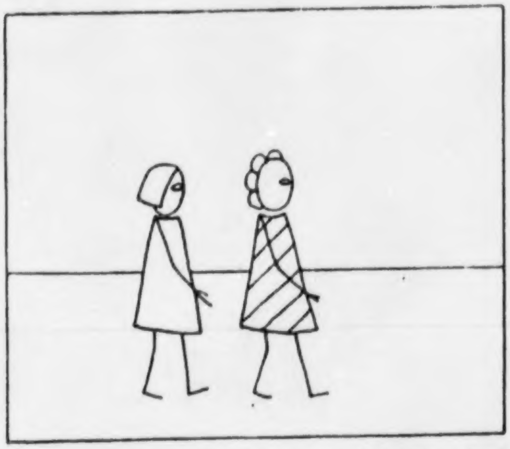
¿Le dicen, "José, podemos jugar contigo?"



Which one is Joe's face?

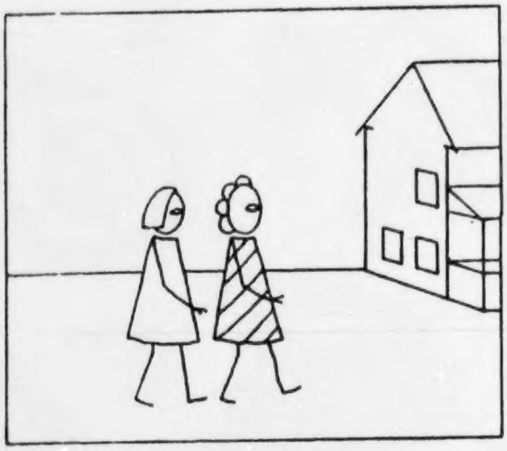
¿Qué cara tiene José?

C - 5



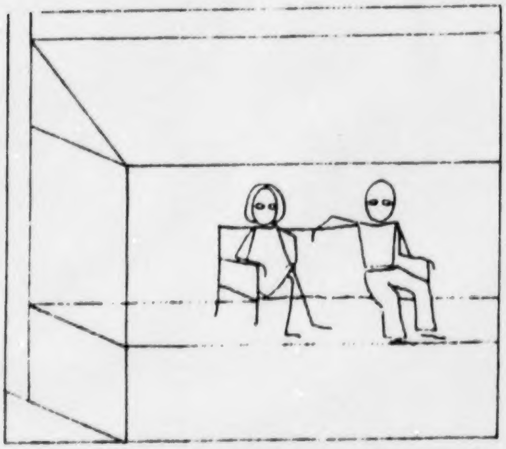
Lynn and her friend are walking to the store.

Lina y su amiga van a la tienda.



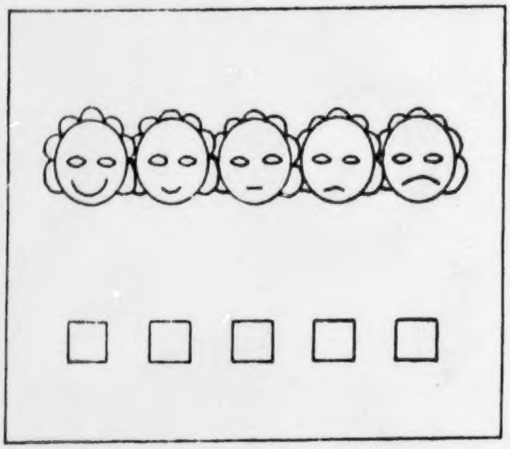
They pass a house in their neighborhood.

Pasan una casa en su barrio.



Some people are sitting on the porch. Lynn says,"Oh, they're looking at us!"

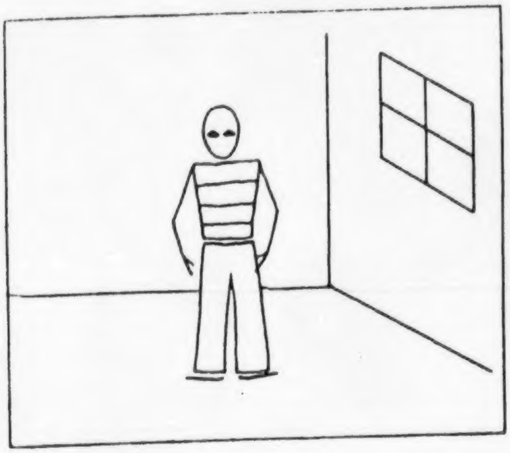
Dos personas están sentadas frente la casa. Lina dice, "¡Ay, nos están viendo!"



Which one is Lynn's face?

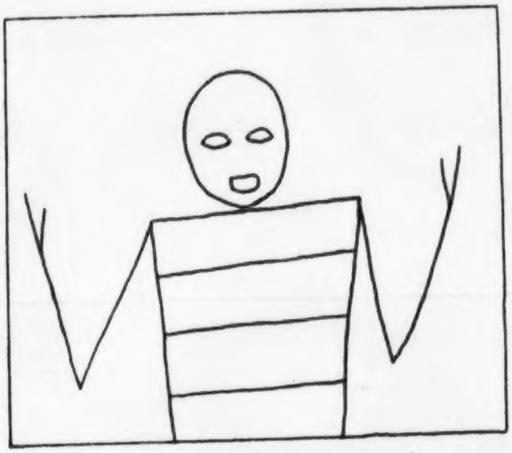
¿Qué cara tiene Lina?

P-6



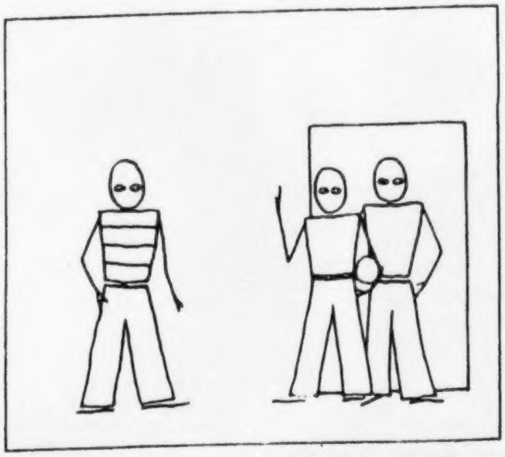
Jerry is at home.

Jesús está en su casa.



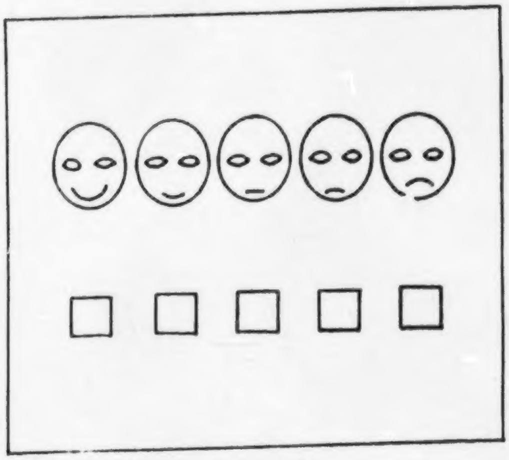
He says,"I don't know what to do

Dice, "No sé que hacer."



Some boys come to ask him to play.

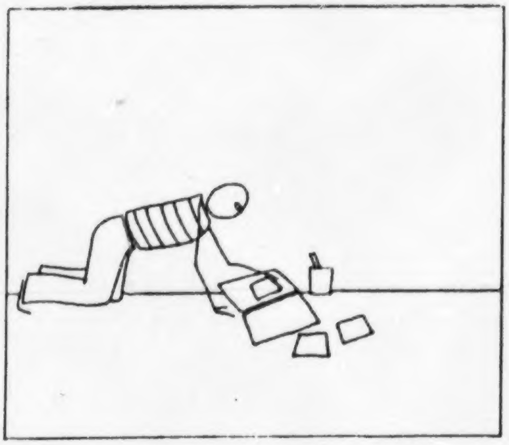
Unos muchachos llegan y lo
envitan a jugar.



Which face is Jerry's?

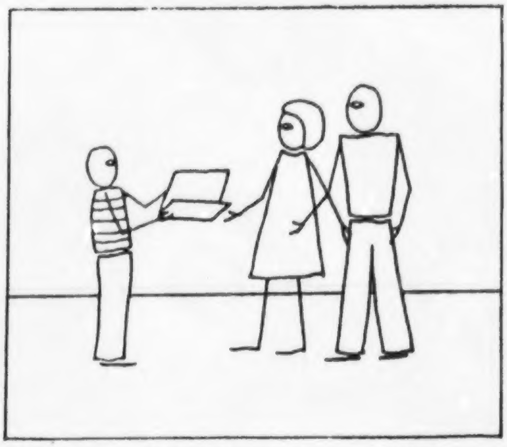
¿Qué cara tiene Jesús?

H - 7



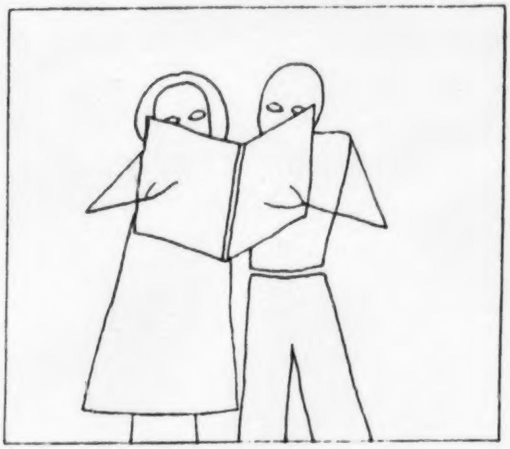
Hank is pasting pictures in a book.

Pancho está pegando retratos en un libro.



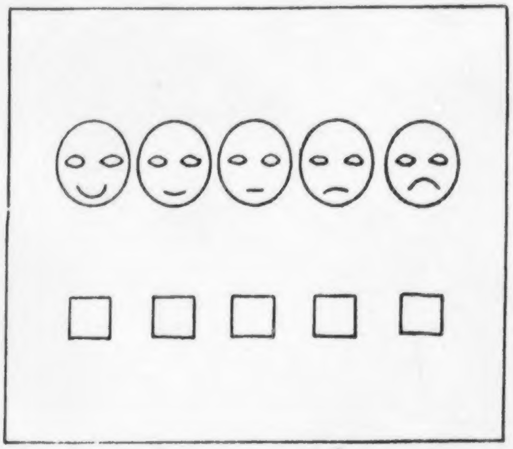
He shows it to his mother and father.

Se lo enseña a sus papás.



They look at it.

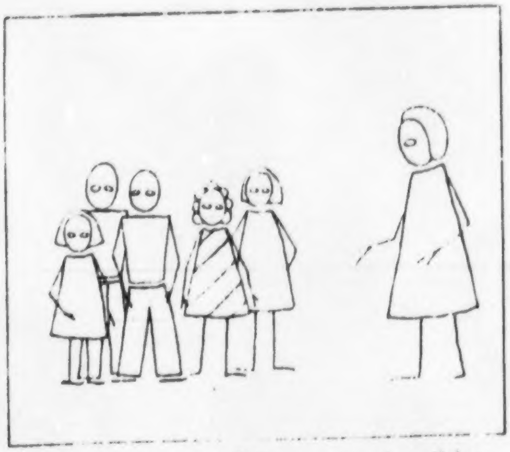
Los papás lo ven.



Which way do they look?

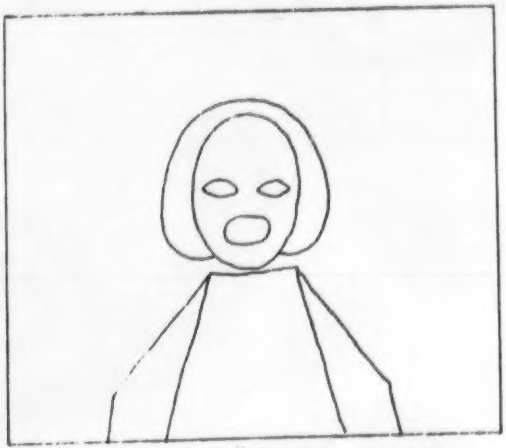
¿Cómo se ven ellos?

S - 8



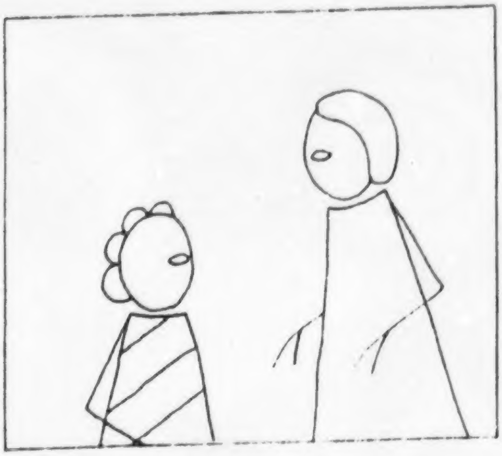
The teacher says, "The school will be open on Saturday. You can come to read, play games, or to make things."

La maestra dice, "La escuela estará abierta el sábado. Pueden venir a leer, jugar o hacer cosas."



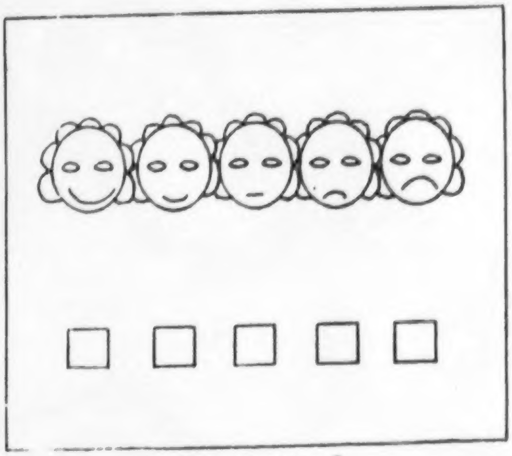
The teacher says, "Do you want to come?"

La maestra dice, "¿Quieren venir?"



She looks at Jane.

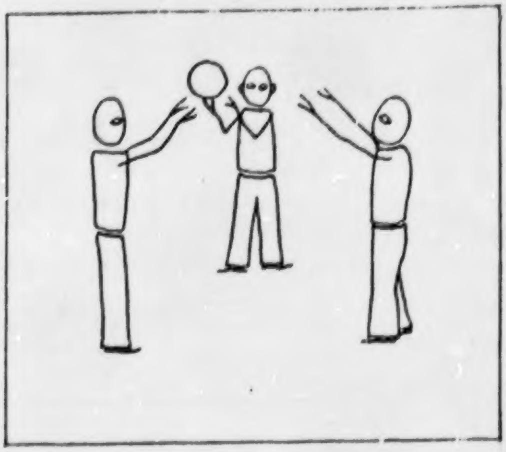
La maestra ve a Teresa.



Which one is Jane's face?

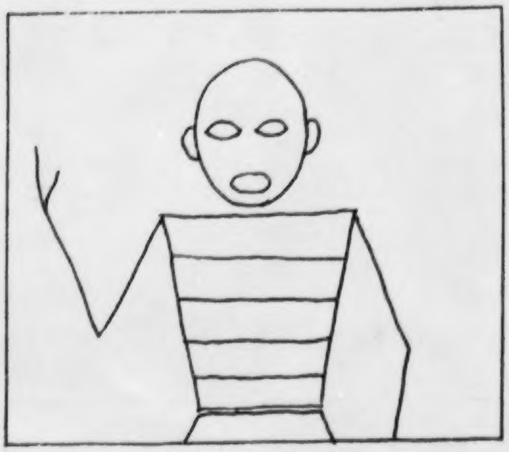
¿Qué cara tiene Teresa?

P-9



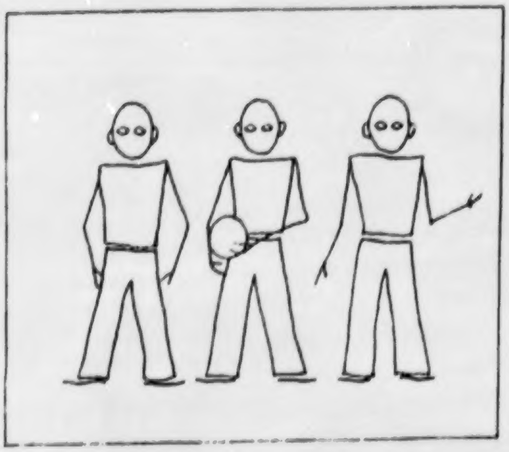
The boys are playing a game.

Los muchachos están jugando.



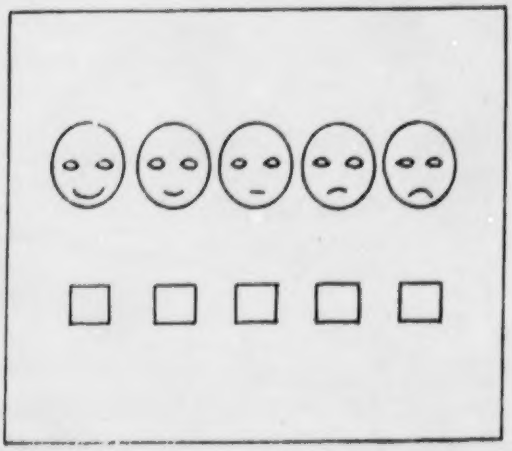
Don says, "I want to play the game with you."

Raúl dice, "Quiero jugar con ustedes."



The boys say, "O.K., but you must obey all our rules."

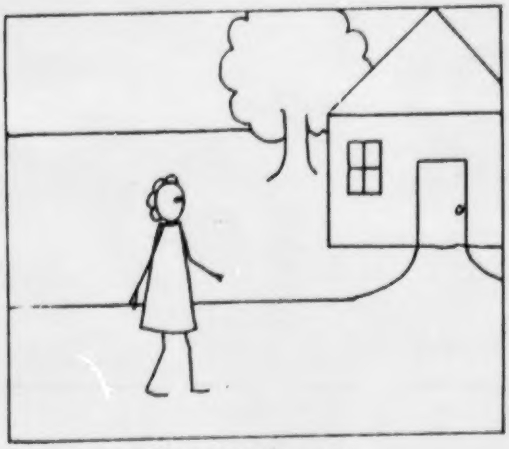
Los muchachos dicen, "Está bien pero tienes que obedecer las reglas."



Which face is Don's?

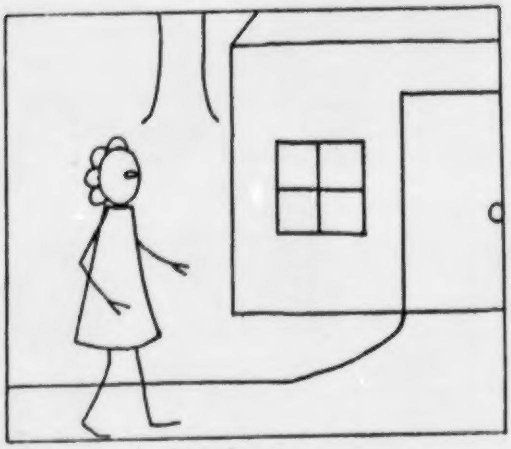
¿Qué cara tiene Raúl?

H-10



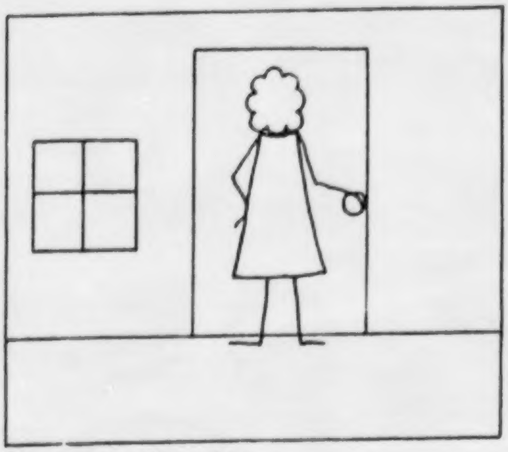
May is on her way home.

María va a su casa.



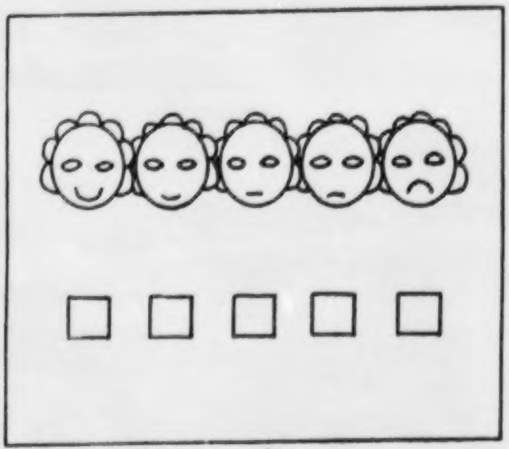
She gets to her house.

Llega a su casa.



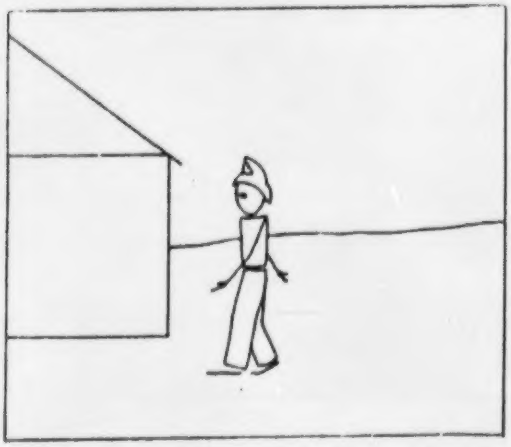
She opens the door.

Abre la puerta.



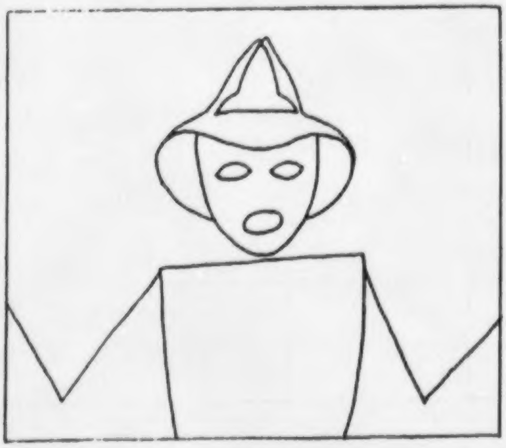
Which face is May's?

¿Qué cara tiene María?



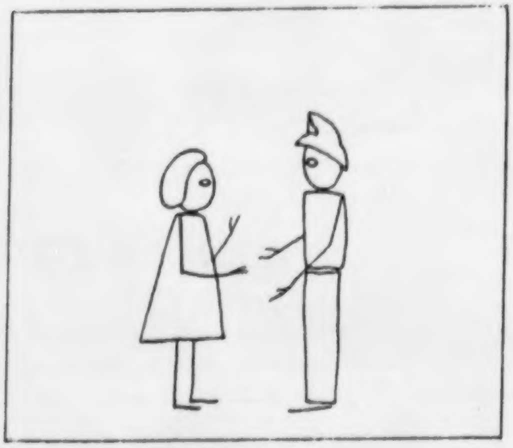
A fireman comes to Tony's house.

Un bombero va a la casa de Antonio.



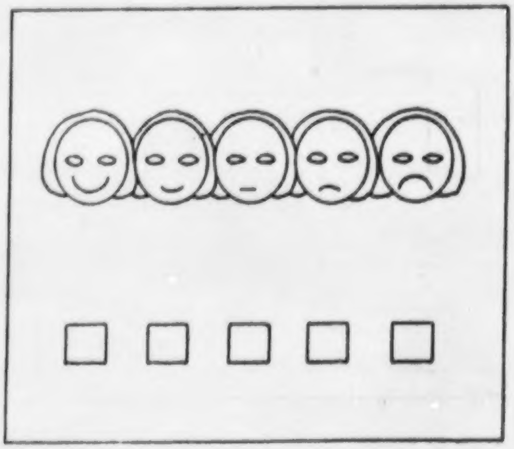
He says,"I want to look around in your house to see that it is safe".

El dice, "Quiero ver alrededor de tu casa a ver que no haya peligro."



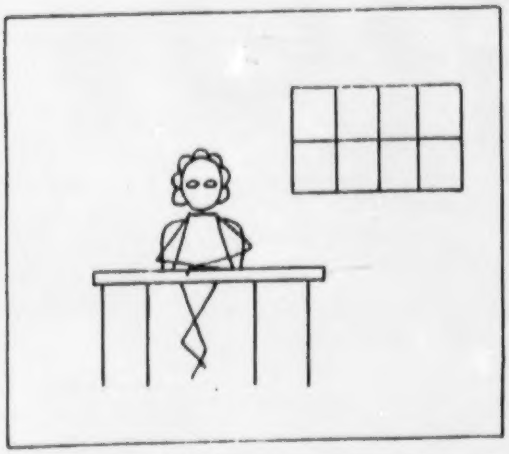
Tony's mother talks to the fireman

La mamá de Antonio habla con el bombero.



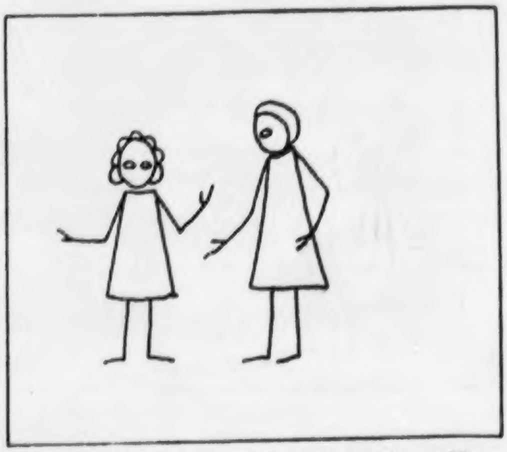
Which one is her face?

¿Qué cara tiene su mamá?



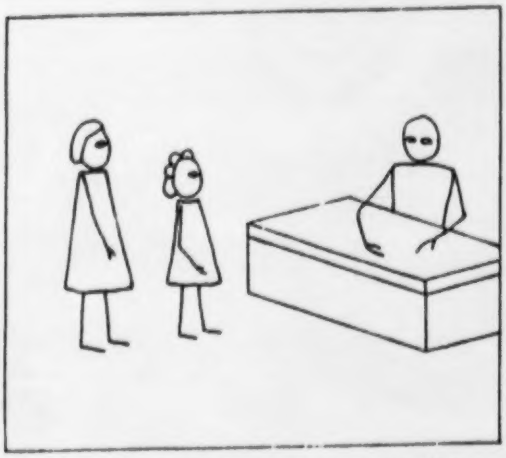
Ann is at school.

Ana está en la escuela.



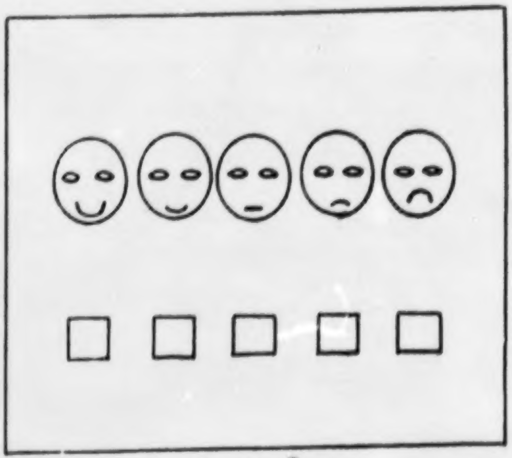
Her teacher says,"Come to the office with me, Ann, the principal wants to see you."

La maestra le dice, "Vamos a la oficina, Ana, el principal quiere verte."



They get to the office. Ann sees the principal.

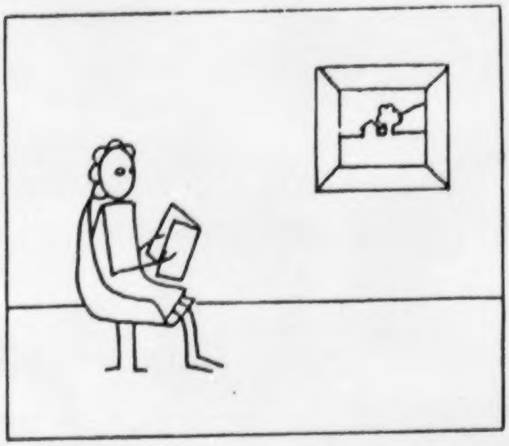
Llegan a la oficinia. Ana ve al principal.



Which one is his face?

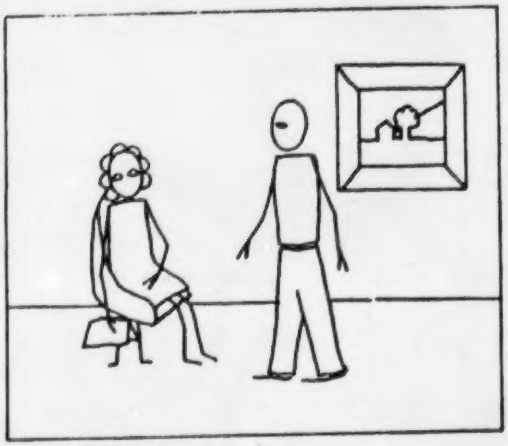
¿Qué cara tiene el principal?

H-13



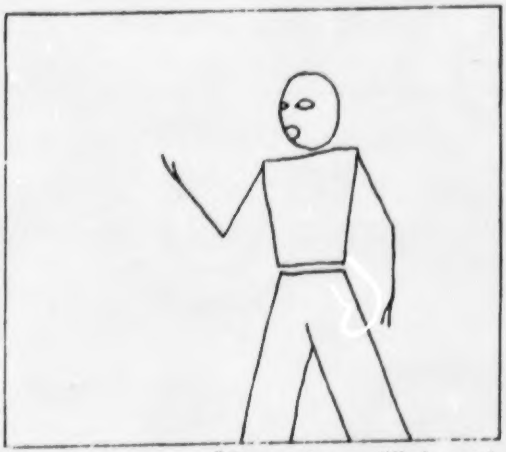
Jill is at home.

Eva está en la casa.



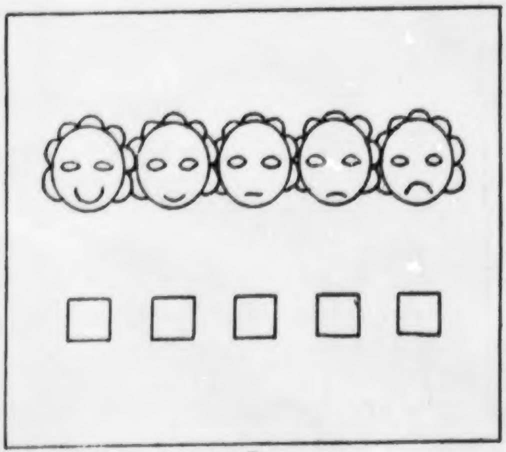
Her father comes in.

Su papá llega.



Her father says,"Come here, Jill. I want to talk to talk to you about something."

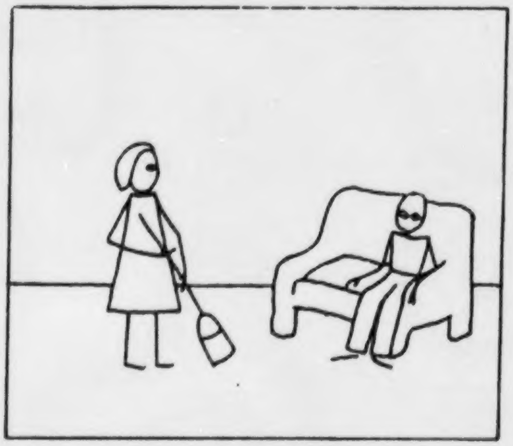
Su padre dice, "Ven acá, Eva. Quiero hablarte de algo."



Which face is Jill's?

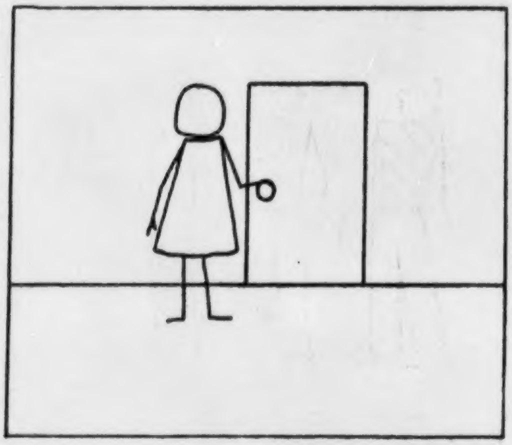
¿Qué cara tiene Eva?

C-14



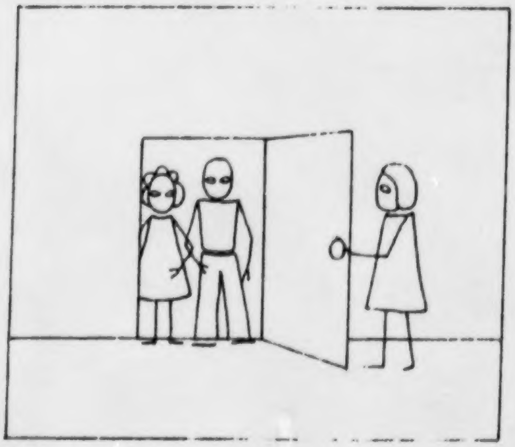
Mike is at home with his mother.

Miguel está en la casa con su mamá.



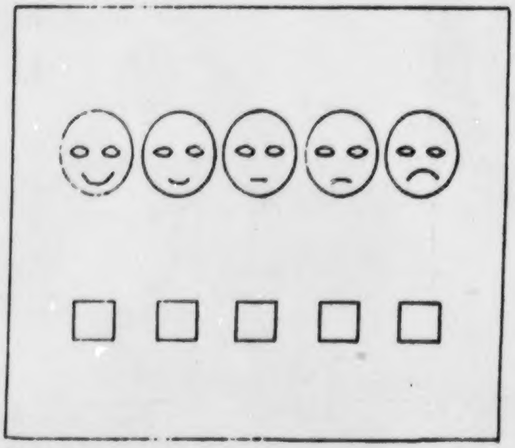
Someone knocks. Mike's mother goes to the door.

Alguien toca. La mamá de Miguel va a la puerta.



Some neighbors are there

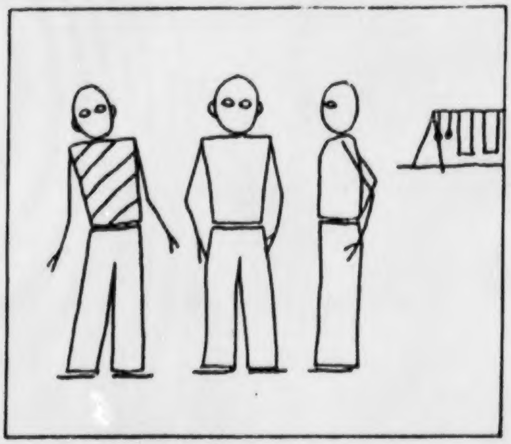
Unos vecinos están ahí.



Which one is Mike's face?

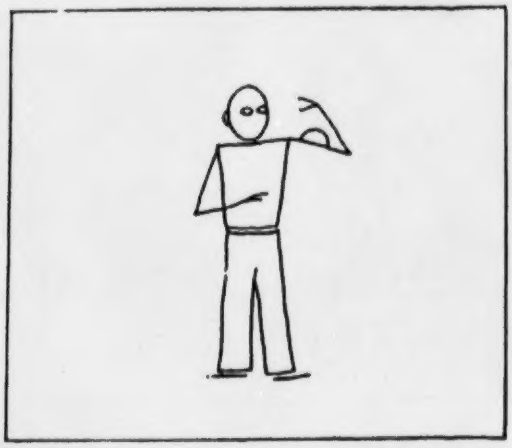
¿Qué cara tiene Miguel?

P-15



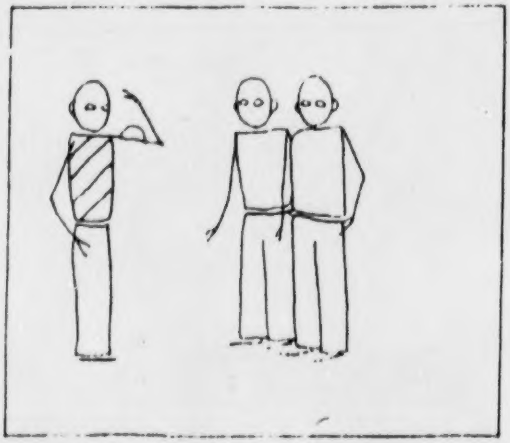
The boys are on the playground.

Los muchachos están en el parque.



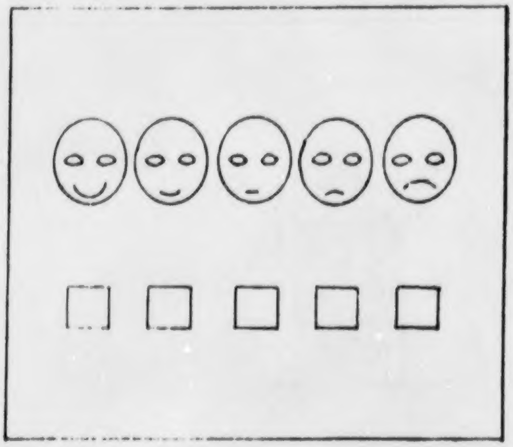
Each one is showing how strong he is.

Cada uno enseña que tan fuerte está.



It is Carl's turn The boys are watching him

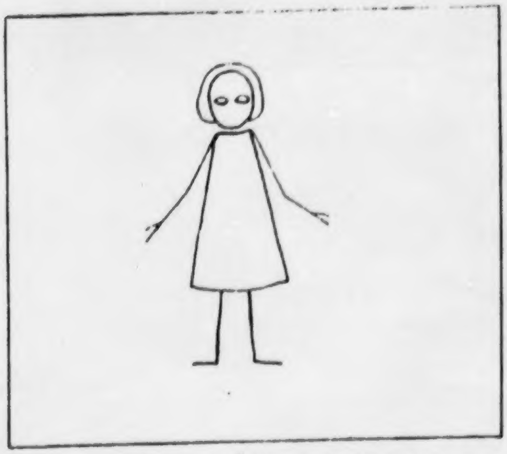
Le toca a Carlos. Los muchachos lo están viendo.



Which face is Carl's?

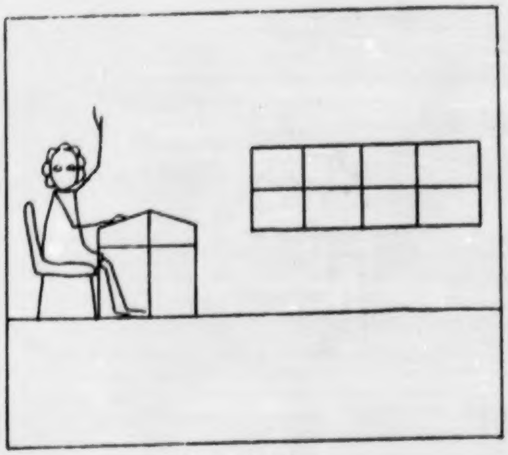
¿Qué cara tiene Carlos?

S-16



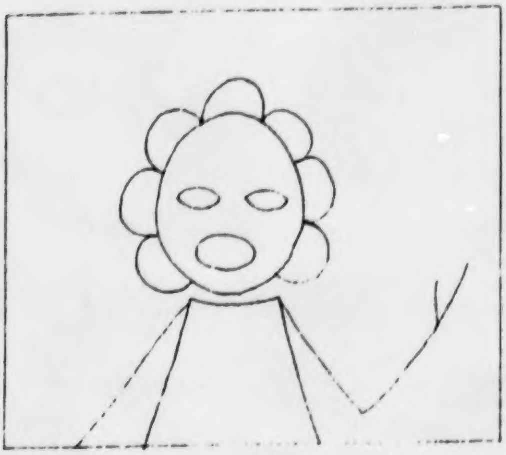
The teacher says,"Class, let's put our chairs together in a circle"

La maestra dice, "Vamos a poner las sillas en una rueda."



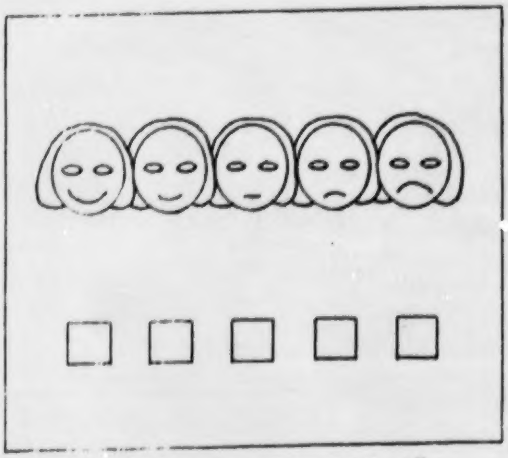
Kathy raises her hand.

Alicia levanta la mano.



Kathy asks to sit next to teacher

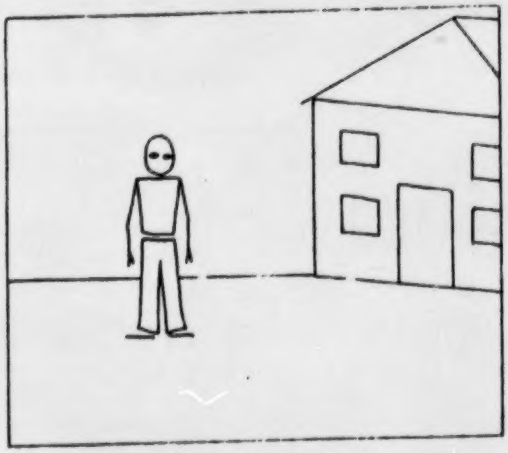
Le pregunta a la maestra que si puede sentarse a su lado.



Which one is the teacher's face?

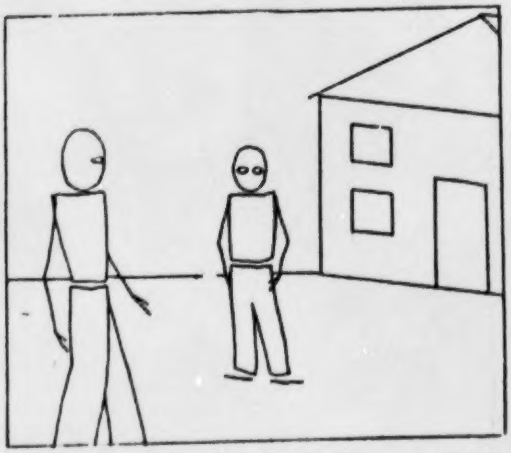
¿Qué cara tiene la maestra?

C-17



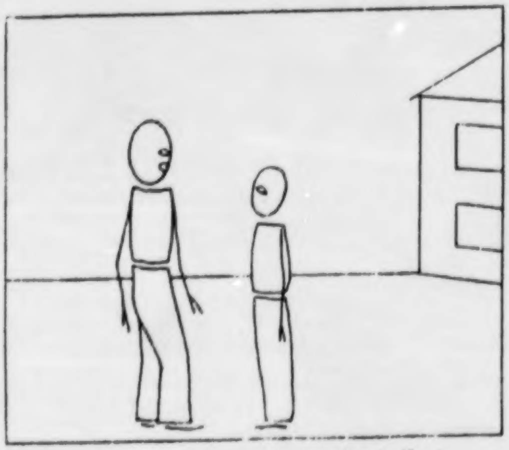
Steve is outside his house.

Pablo está afuera de su casa.



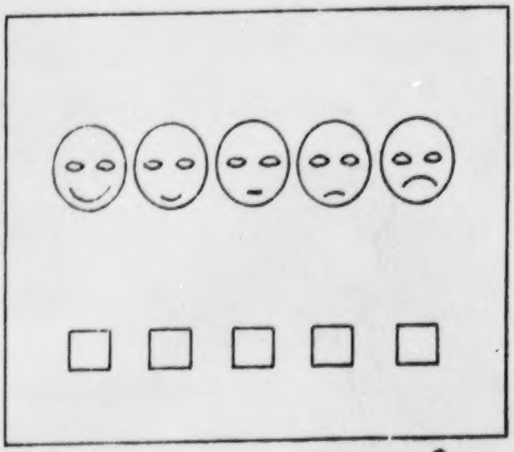
Steve sees the neighbor man coming up to his house.

Pablo ve a un vecino venir para su casa.



The neighbor man stops to talk to Steve

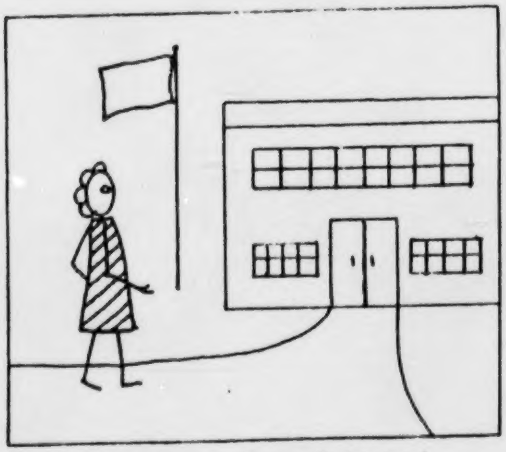
El vecino se para a platicar con Pablo.



Which face is the neighbor man's?

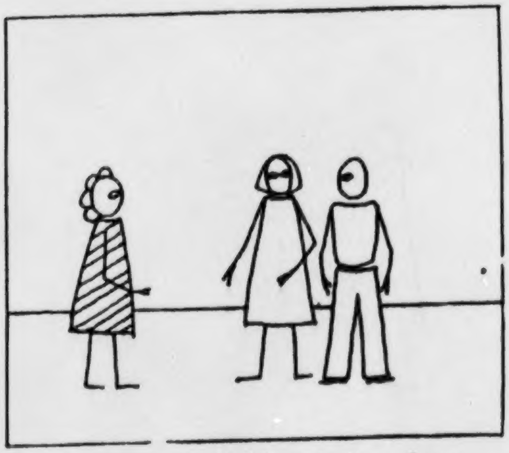
¿Qué cara tiene el vecino?

P-18



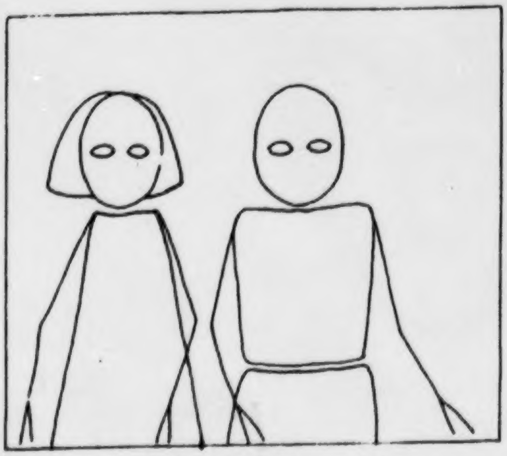
Janet is coming up the walk toward school.

Sylvia va para la escuela.



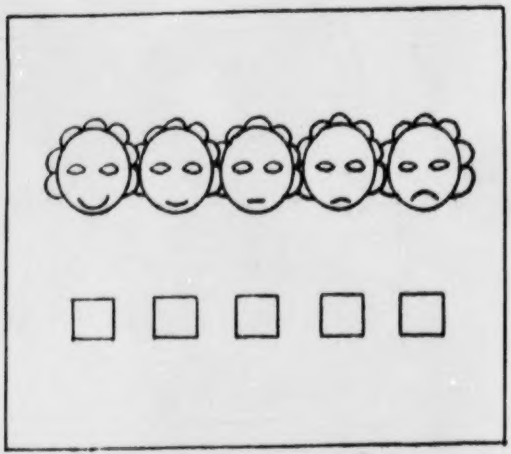
She sees some children in her class.

Ve unos niños de su clase.



Janet sees them looking at her.

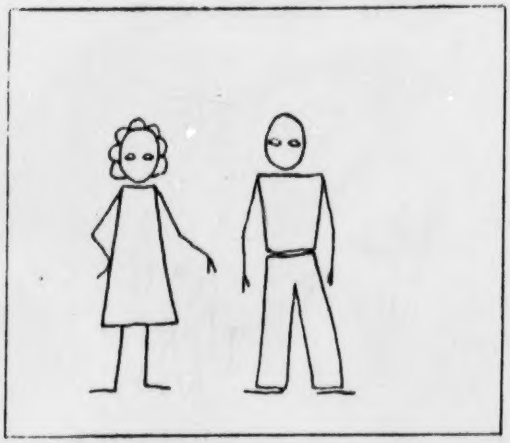
Sylvia se fija que la están mirando.



Which one is Janet's face?

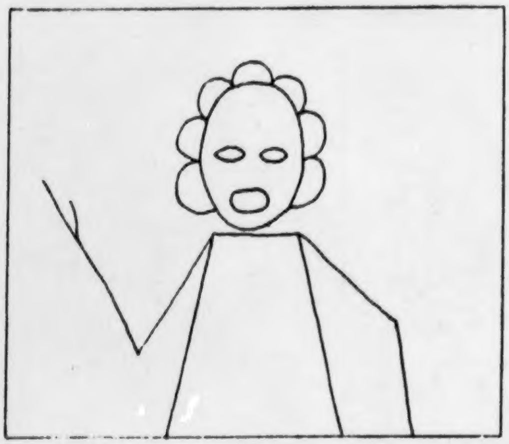
¿Qué cara tiene Sylvia?

S-19



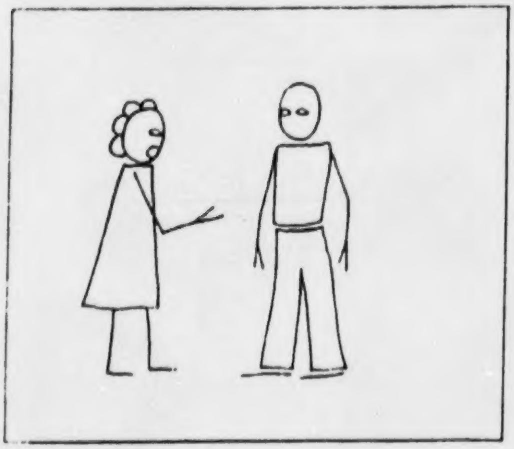
Jean is visiting Dave.

Celia está visitando a David.



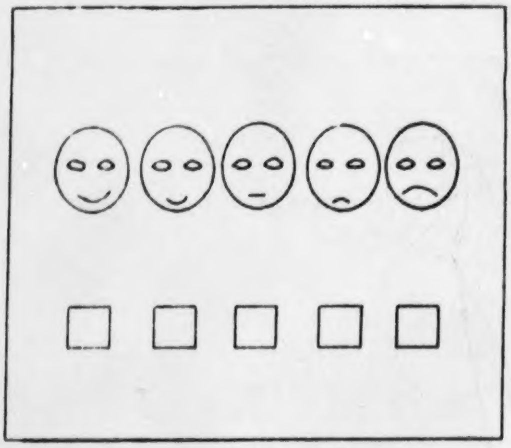
She says, "I go to a nice school."

Dice ella, "Voy a una escuela buena."



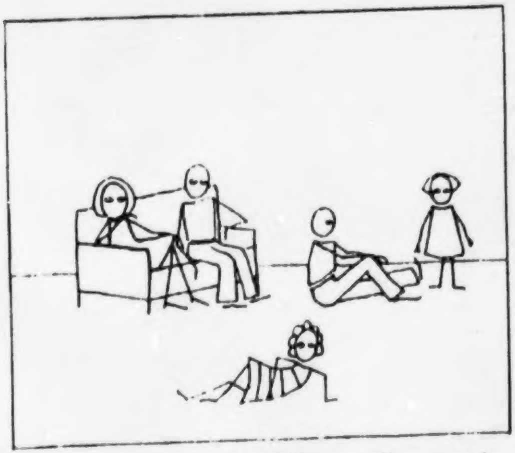
She says, "How do you like your school, Dave?"

Dice ella, "¿Como te gusta tu escuela, David?"



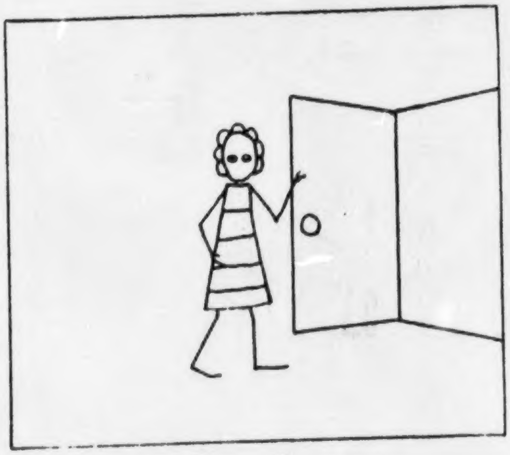
Which one is Dave's face?

¿Que cara tiene David?



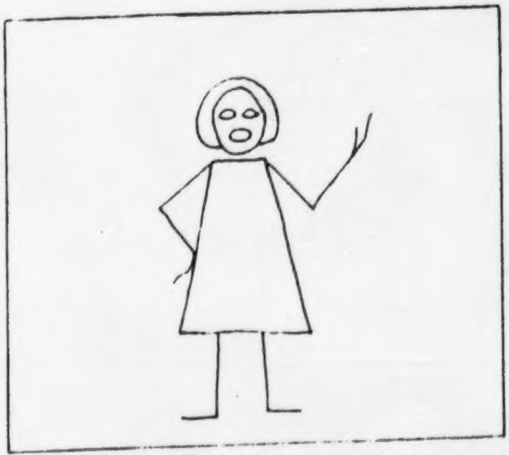
Molly is at home with her mother and father, her brother and her sister.

Amalia está en la casa con su mamá, papá, y hermanos.



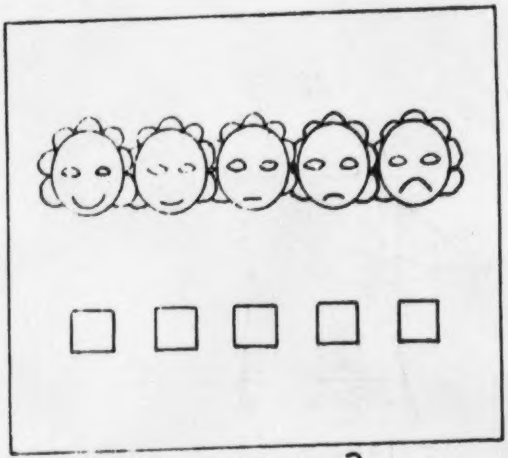
She starts to leave the room.

Ella empieza a salir del cuarto.



Mother says, "Stay here Molly, our whole family is together."

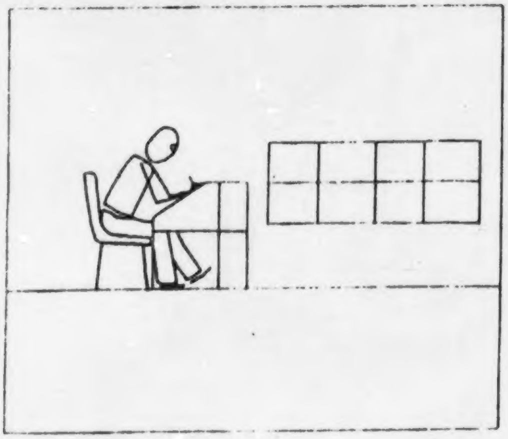
La mamá dice, "Quédate aquí Amalia, toda nuestra familia está junta."



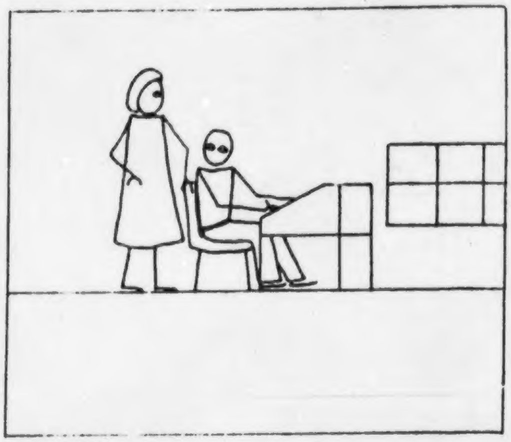
Which one is Molly's face?

¿Qué cara tiene Amalia?

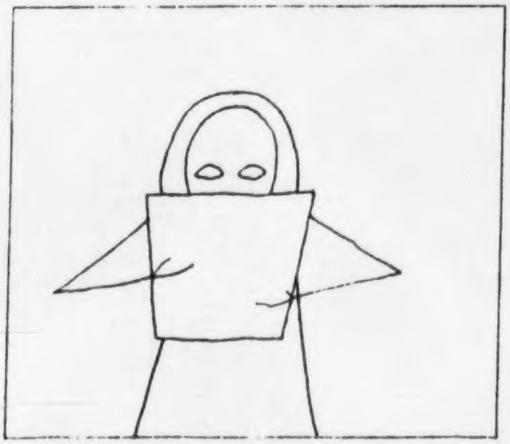
S-21


Mark is working at school.

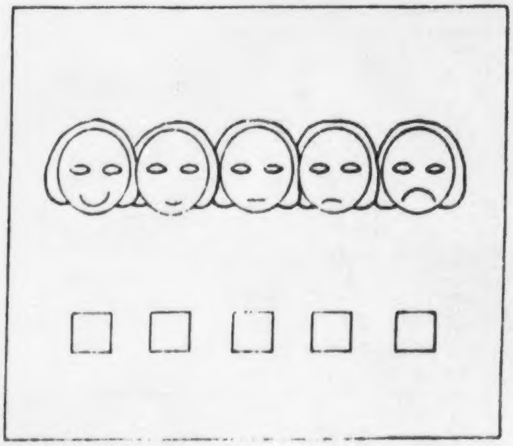
Marcos está trabajando en la escuela.


Mark's teacher comes over.

La maestra de Marcos viene.

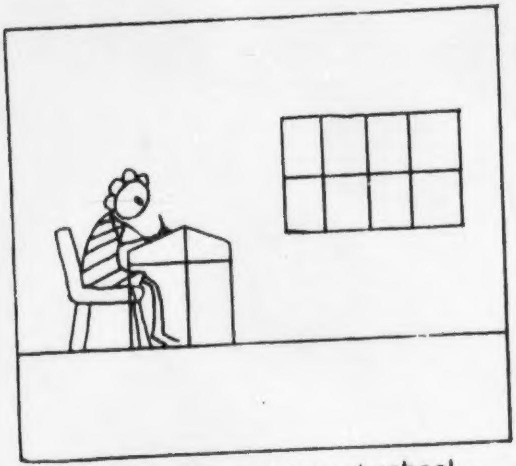

She looks at Mark's work.

Ella ve el trabajo de Marcos.


Which one is the teacher's face?

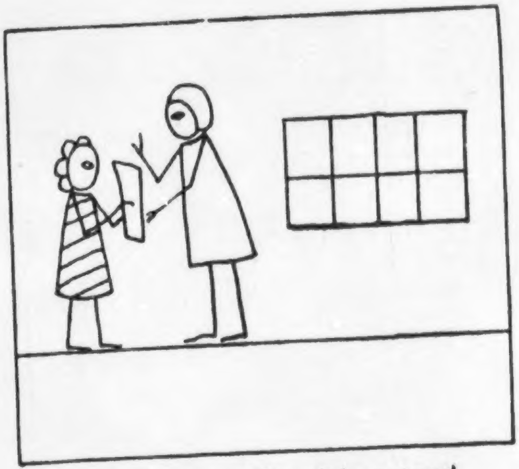
¿Qué cara tiene la maestra?

P-22



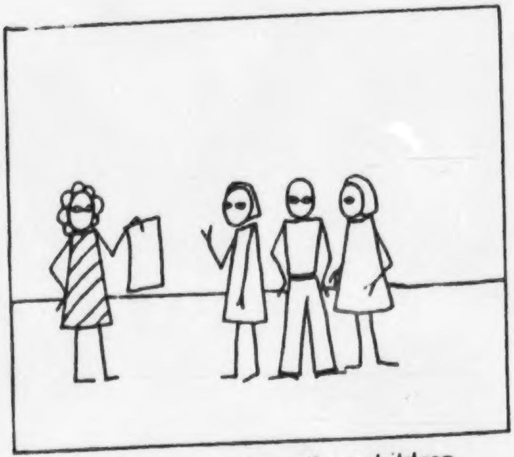
Alice has made a picture at school.

Alicia hizo un retrato en la escuela.



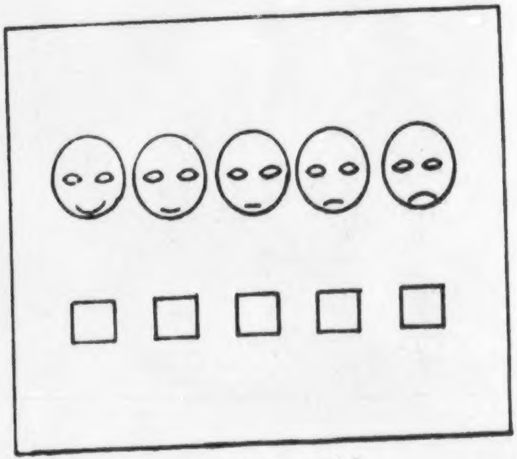
The teacher tells Alice it is a good picture.

La maestra le dice a Alicia que es un buen retrato.



Alice shows it to the other children after school.

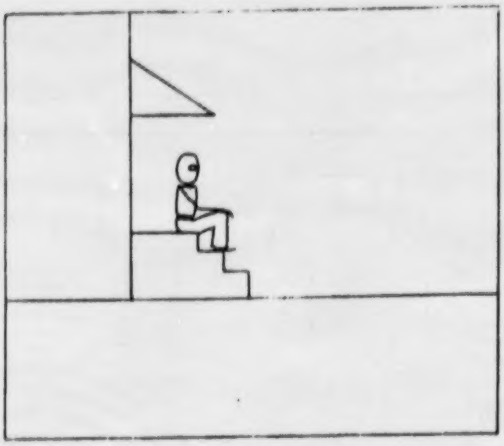
Alicia se lo enseña a otros niños después de las clases.



How do their faces look?

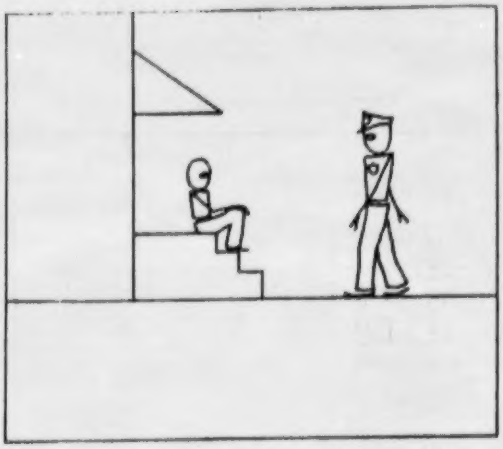
¿Qué caras tienen?

C-23



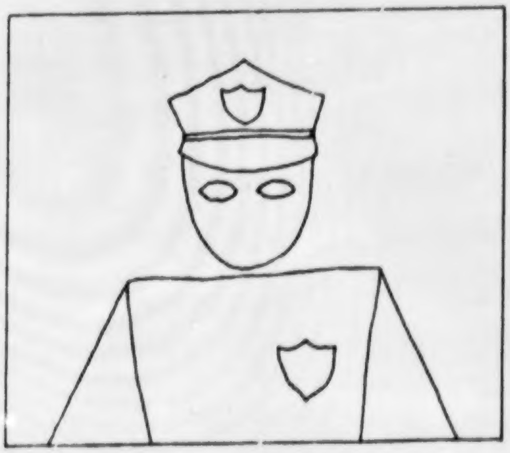
Max is sitting on his steps.

Mario está sentado en los escalones.



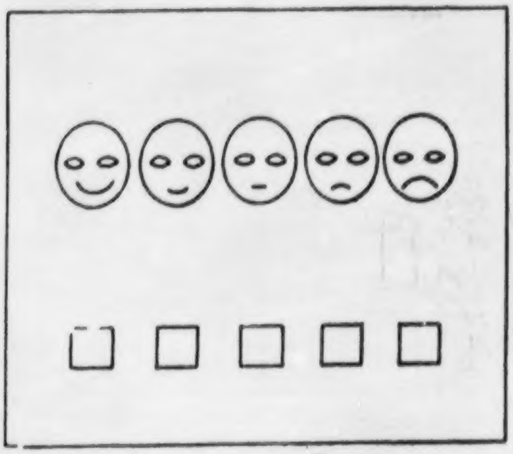
He sees a policeman walking up to him.

Ve a un policia que va caminando hacia él.



The policeman looks at Max.

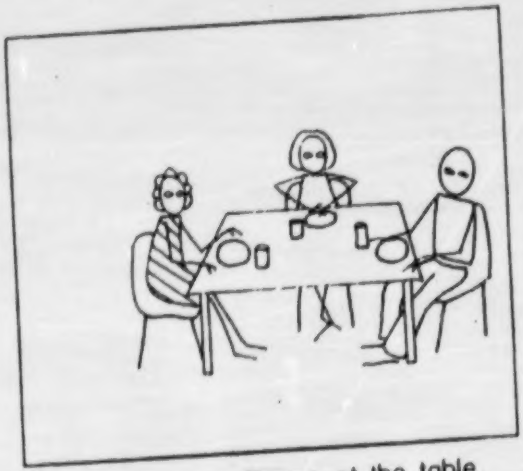
El policia ve a Mario.



Which one is Max's face?

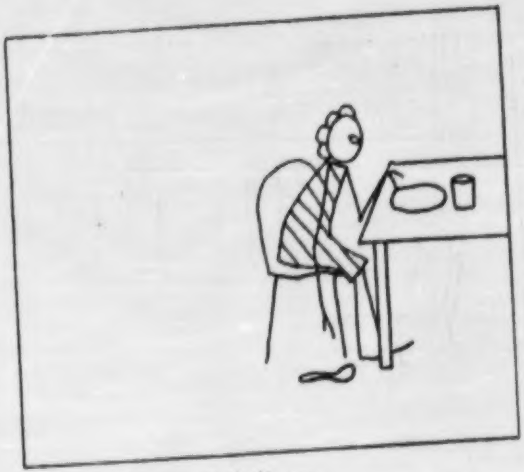
¿Que cara tiene Mario?

H-24



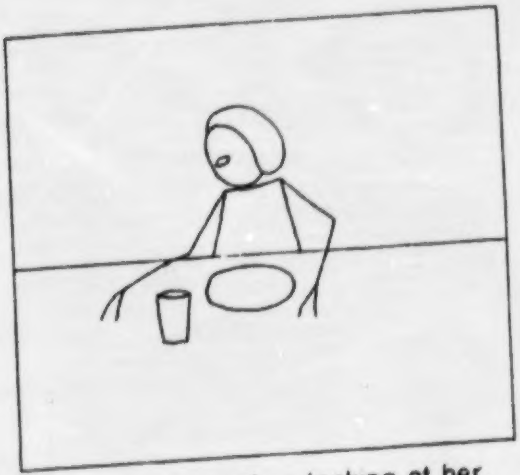
Betty drops her spoon at the table.

A Berta se le cae la cuchara de la mesa.



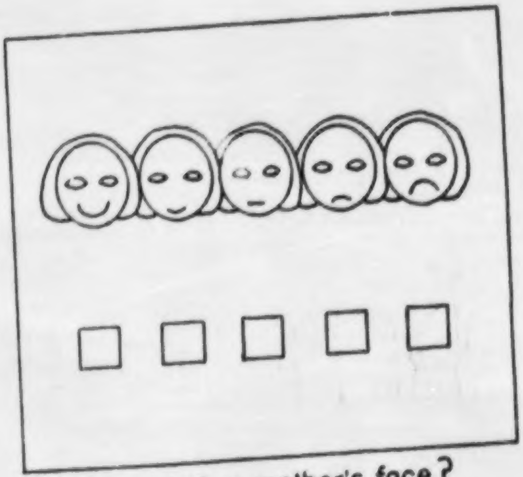
She starts to pick it up.

Va a levantarla.



She sees her mother looking at her.

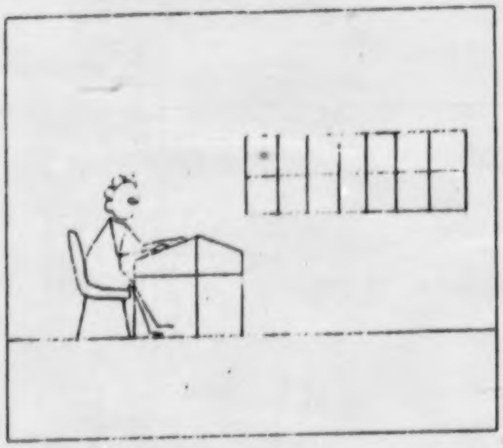
Se fija que su mamá la está viendo.



Which one is her mother's face?

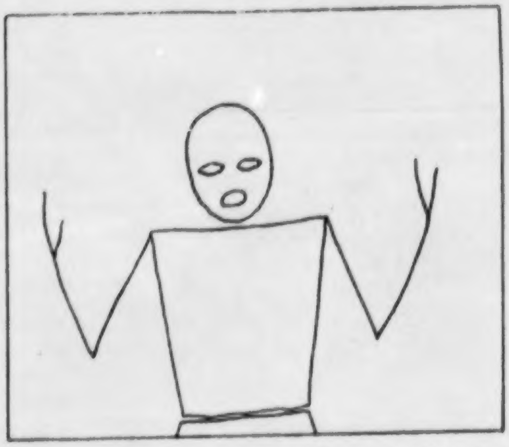
¿Qué cara tiene su mamá?

S-25



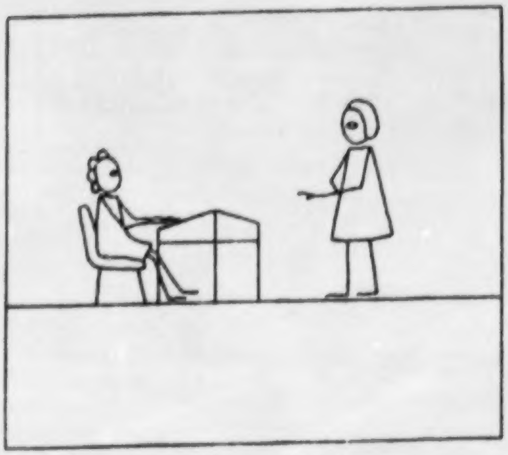
Julie is in school

Julia está en la escuela.



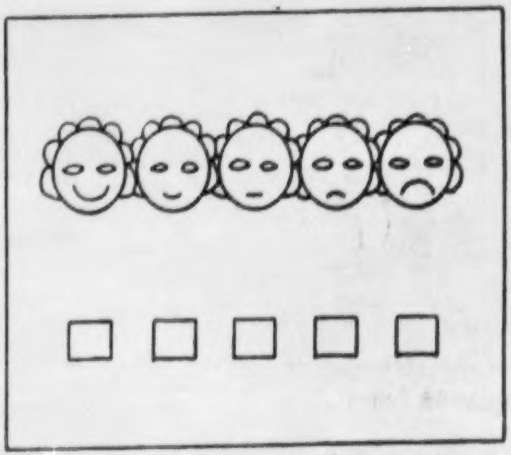
Each child is telling about something he did

Cada niño está contando algo que hizo.



The teacher calls on Julie.

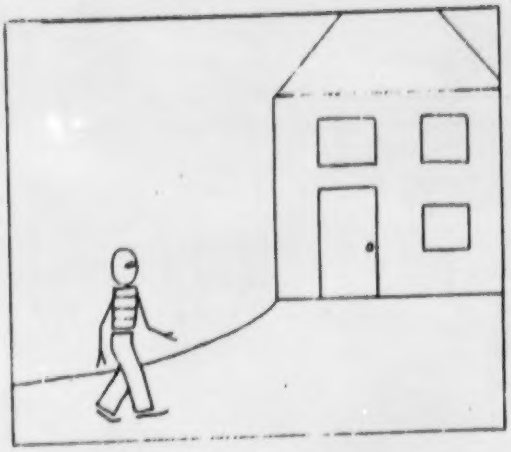
Le toca a Julia.



Which one is Julie's face?

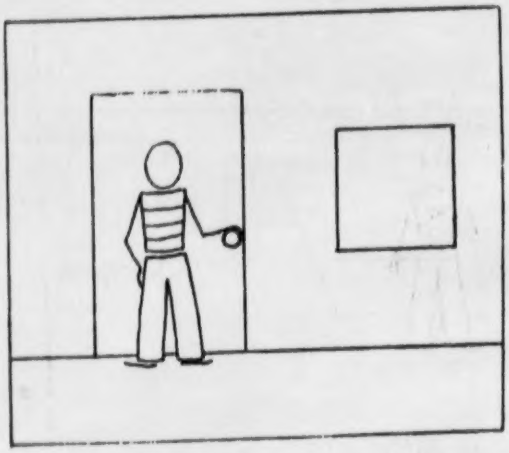
¿Qué cara tiene Julia?

H-26



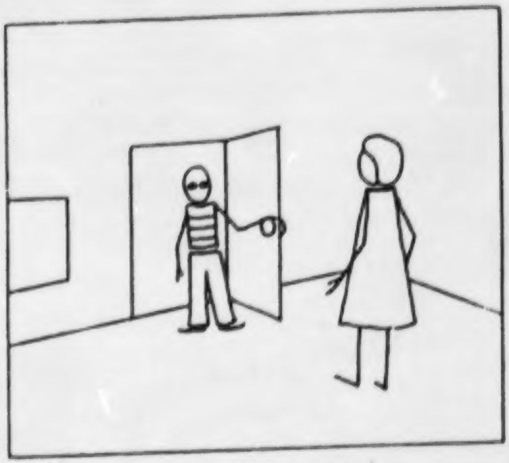
Phil is coming home

Felipe llega a su casa.



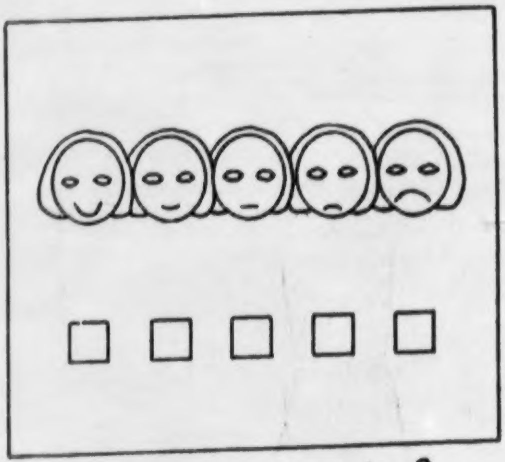
He opens the door.

Abre la puerta.



His mother sees him come in.

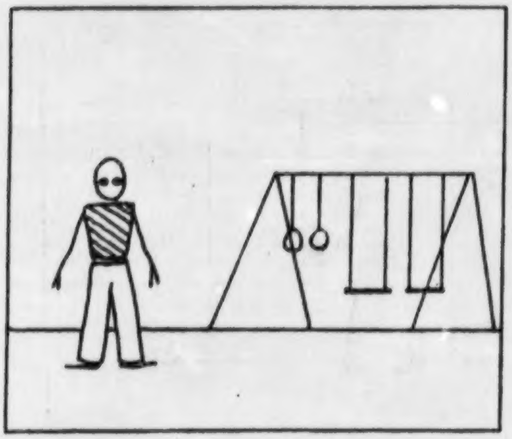
Su madre lo ve entrar.



Which one is his mother's face?

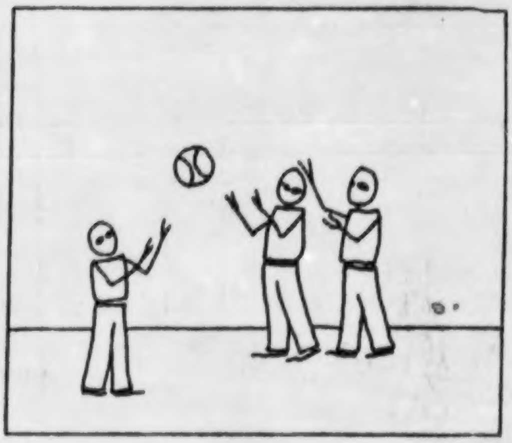
¿Qué cara tiene su mamá?

P-27



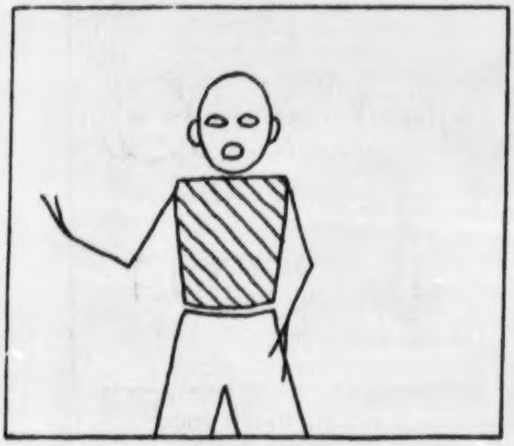
John is on the playground.

Juan está en la parque.



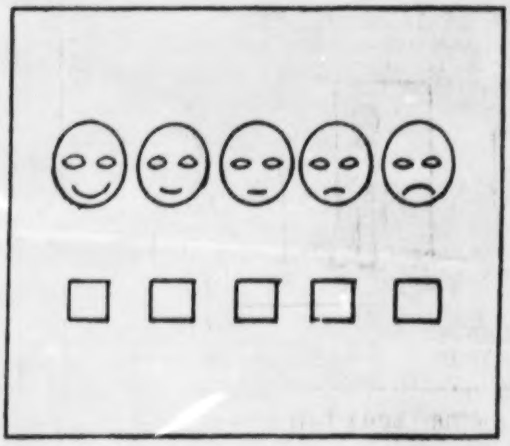
He sees a group of children playing a game.

Ve un grupo de niños jugando.



John asks the boys if he can play with them.

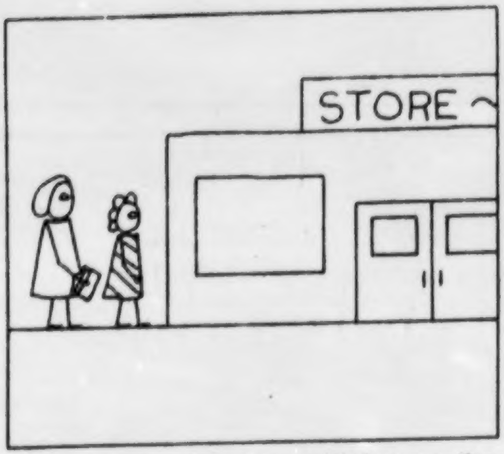
Juan les pregunta que si puede jugar con ellos.



How do the boys look?

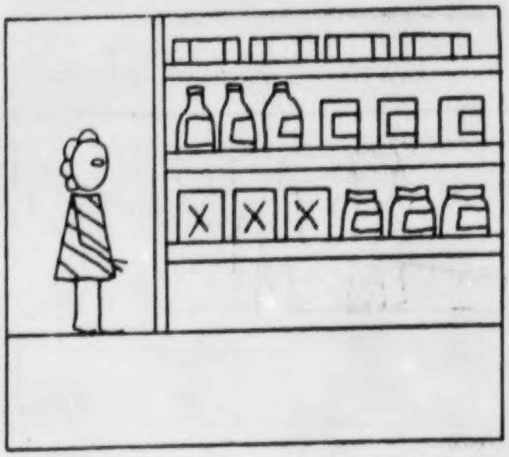
¿Qué cara tienen los muchachos?

C-28



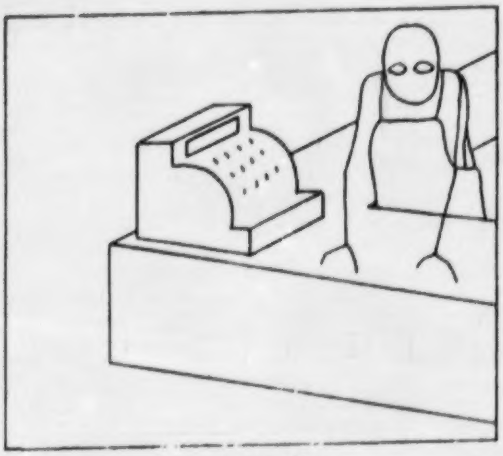
Sue goes to the store with her mother.

Susana va a la tienda con su mamá.



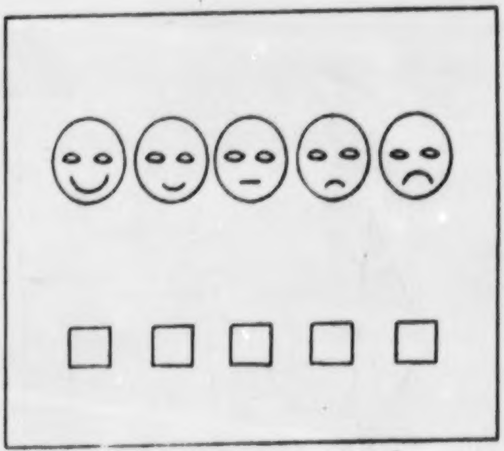
Sue looks at things while mother shops.

Susana mira mientras su mamá compra.



The store-man sees Sue

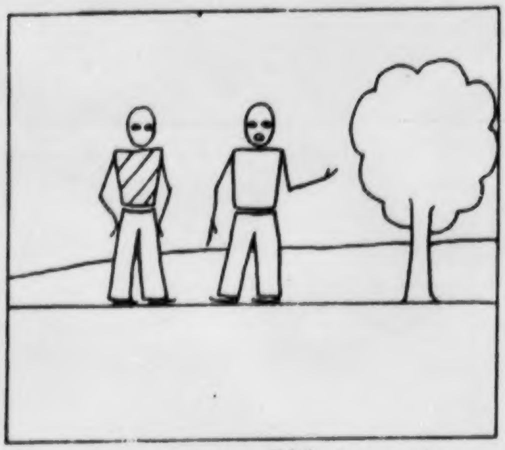
El dueño de la tienda ve a Susana.



Which face is the store-man's?

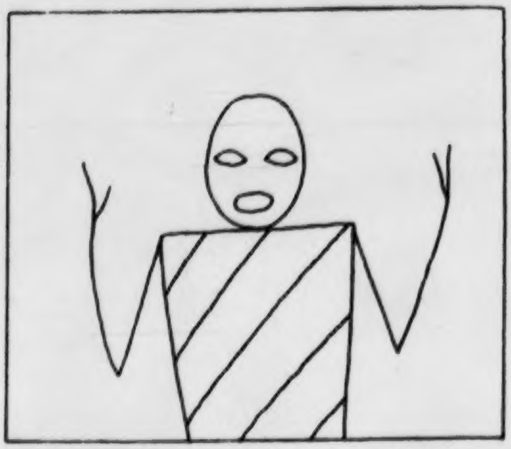
¿Qué cara tiene el dueño?

H-29



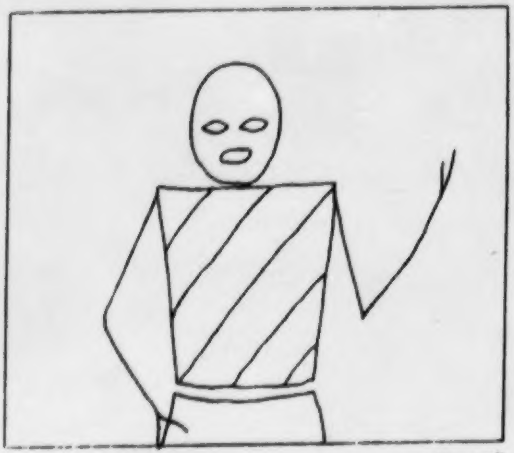
Tom wants to go to Bill's house to play.

Tomás quiere ir a la casa de Guillermo a jugar.



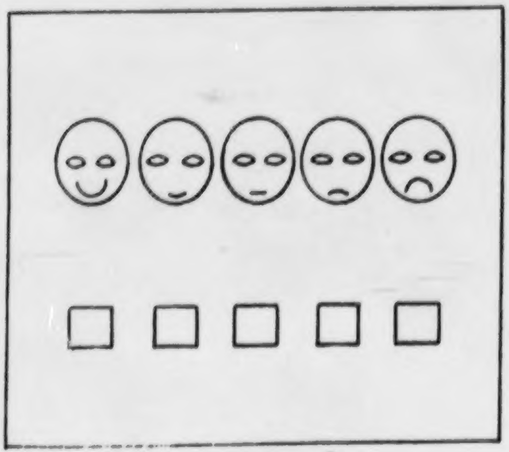
Bill says, "No. My folks are always mean!"

Guillermo dice, "¡No, mis papás siempre son malos!"



Bill says, "Let's go to your house, Tom!"

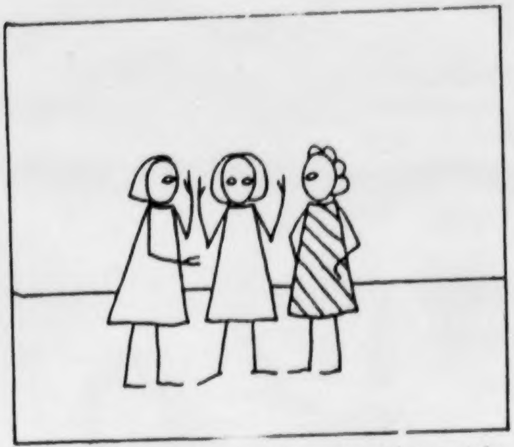
Guillermo dice, "¡Vamos a tu casa, Tomás!"



Which one is Tom's face?

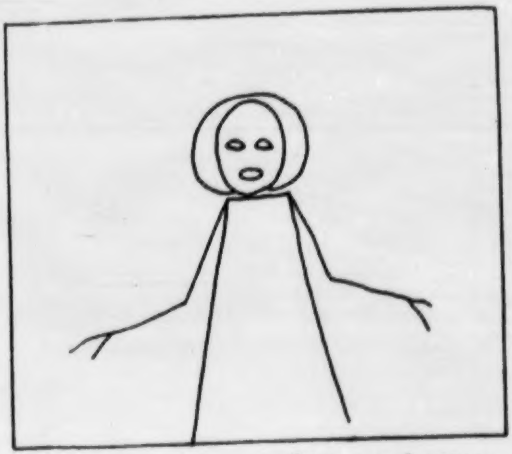
¿Qué cara tiene Tomás?

P-30



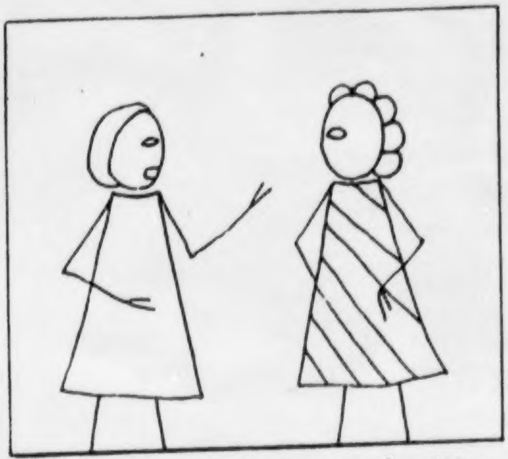
Peggy is in a club with some other girls.

Patricia está en un club con otras niñas.



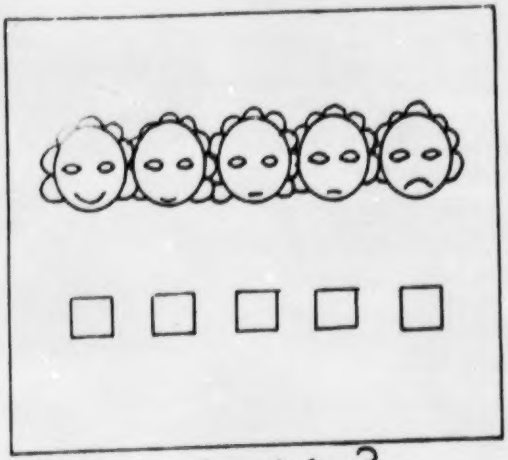
One of the girls says,"We need more kids for our club."

Una de las niñas dice, "Necesitamos más niñas para nuestro club."



She says, Peggy, do you want more girls in our club?

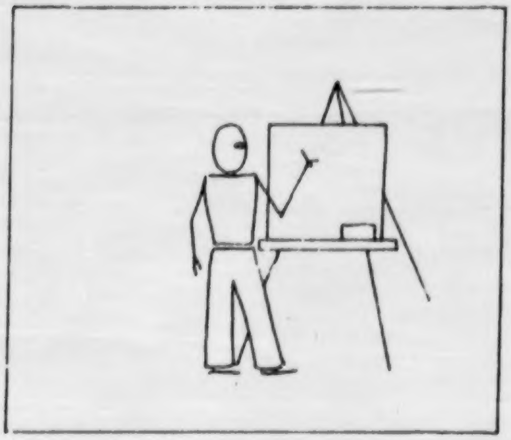
Ella le dice a Patricia, "¿Quieres más niñas en el club?"



Which one is Peggy's face?

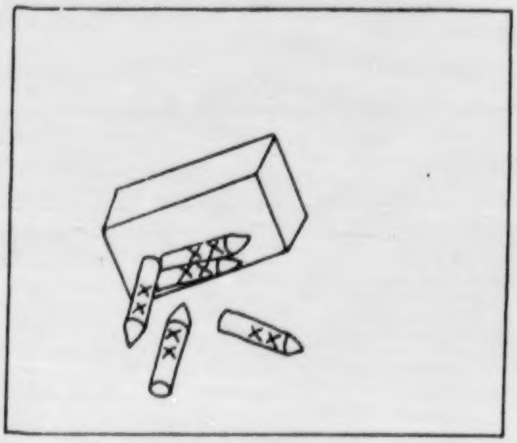
¿Qué cara tiene Patricia?

S-31



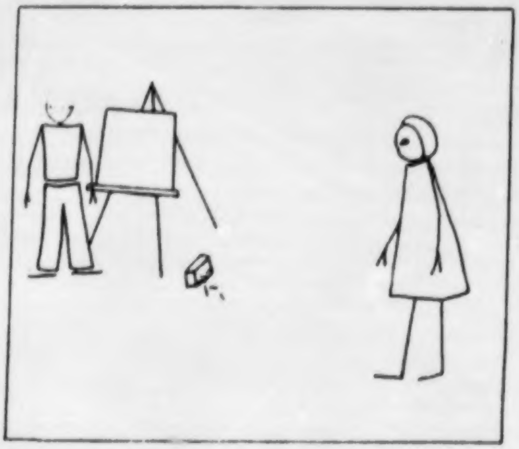
Ray is drawing at school.

Ramón está haciendo un retrato
en la escuela.



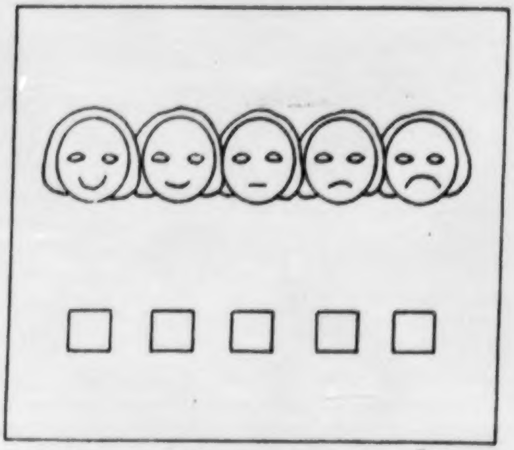
He spills his crayons on the floor.

Se le caen los colores al piso.



He sees the teacher coming over...

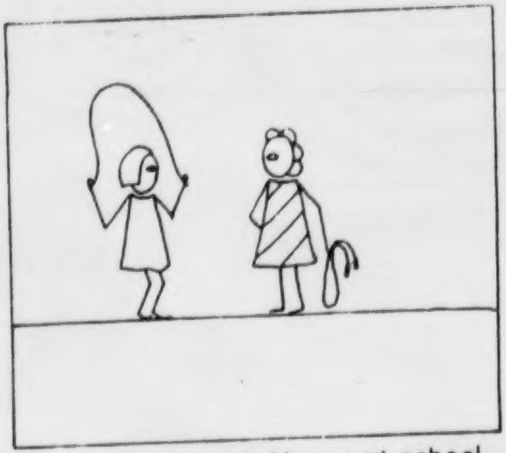
Ve que la maestra viene.



Which one is the teacher's face?

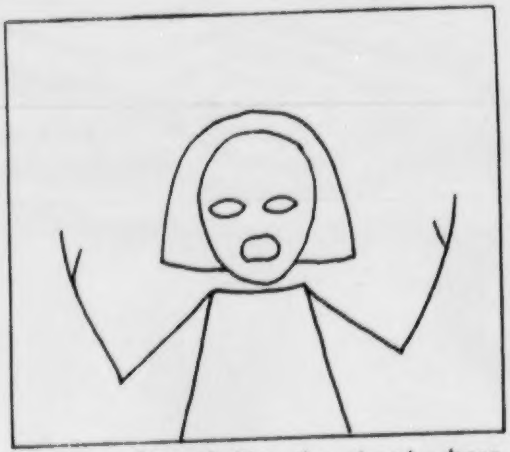
¿Qué cara tiene la maestra?

C-32



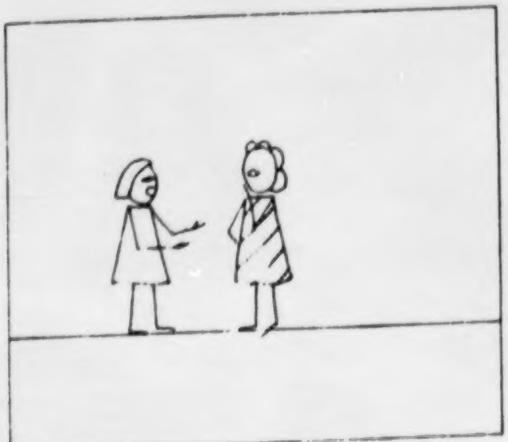
Rita is playing with Nancy at school.

Rita está jugando con Nena en la escuela.



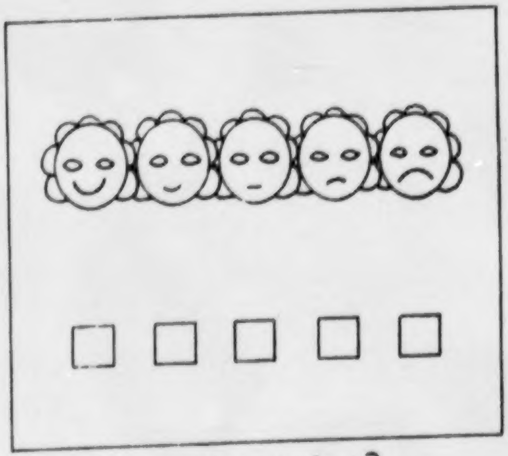
Rita says,"I dont like the street where I live. Everything is so ugly."

Rita dice, "No me gusta la calle donde vivo. Todo está muy feo."



She says,"Do you like your street, Nancy?"

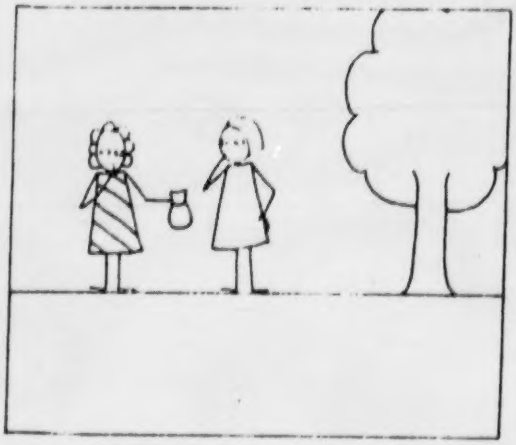
Dice ella, "¿A ti te gusta tu calle, Nena?"



Which one is Nancy's face?

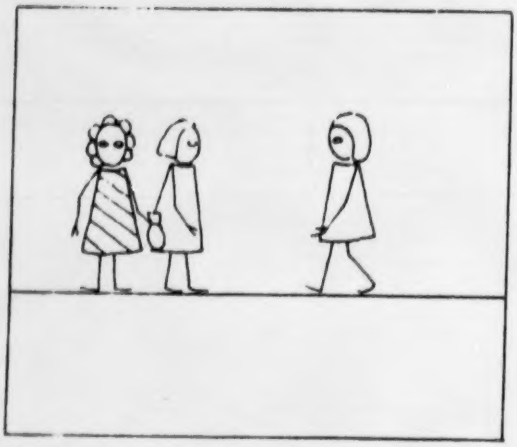
¿Qué cara tiene Nena?

P-33



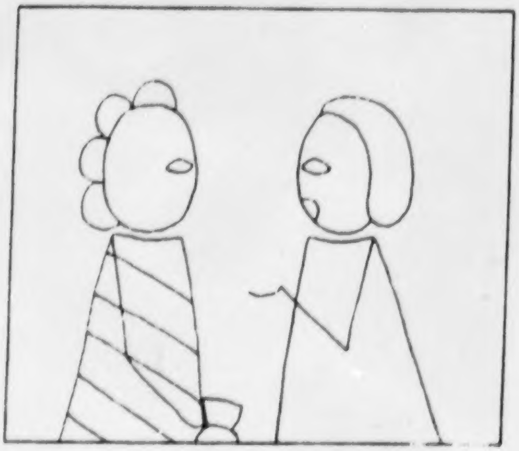
Carol and Lucy have some candy

Carolina y Lucia tienen dulces.



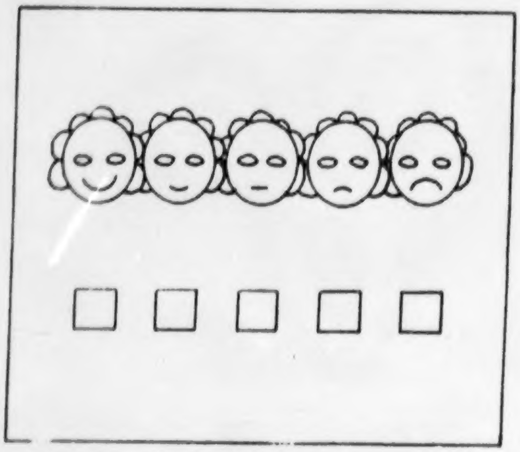
Another girl comes up

Llega otra muchacha.



She asks Carol for some candy

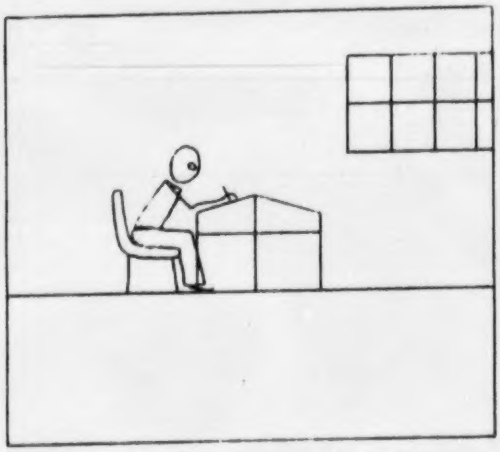
La muchacha le pide dulce a Carolina.



Which one is Carol's face?

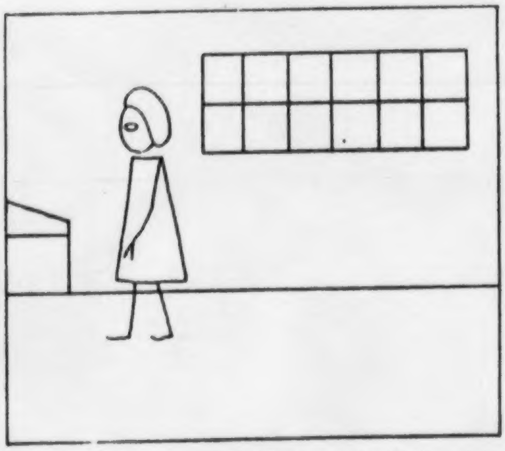
¿Qué cara tiene Carolina?

S-34



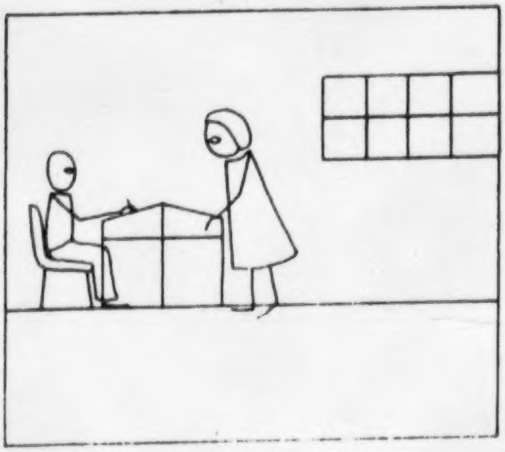
Jeff and his class are working at school.

Adolfo y su clase están trabajando en la escuela.



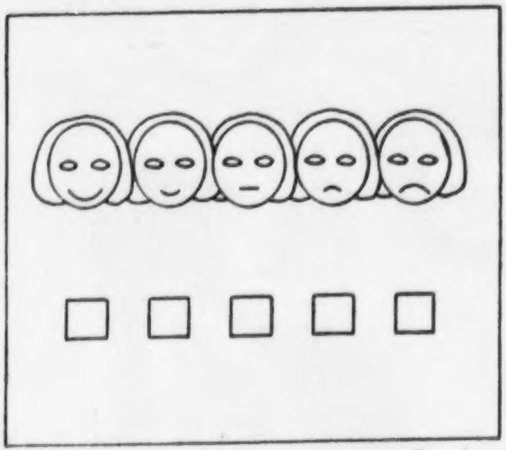
The teacher is walking around the room.

La maestra camina alrededor de la clase.



She stops at Jeff's desk

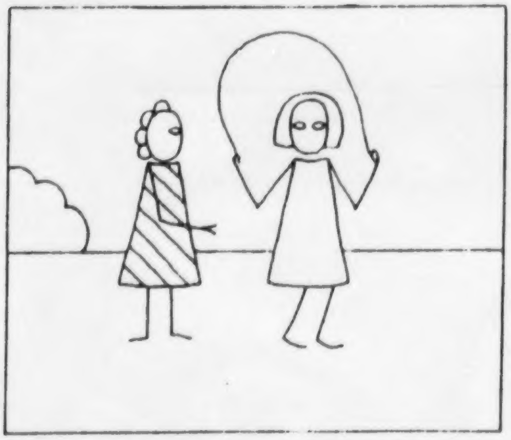
Se para junto al escritorio de Adolfo.



Which one is the teacher's face?

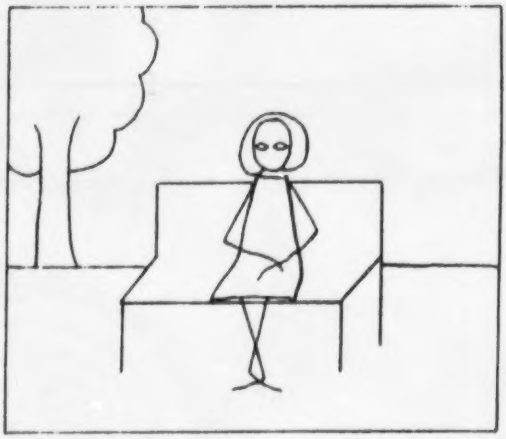
¿Que cara tiene la maestra?

C-35



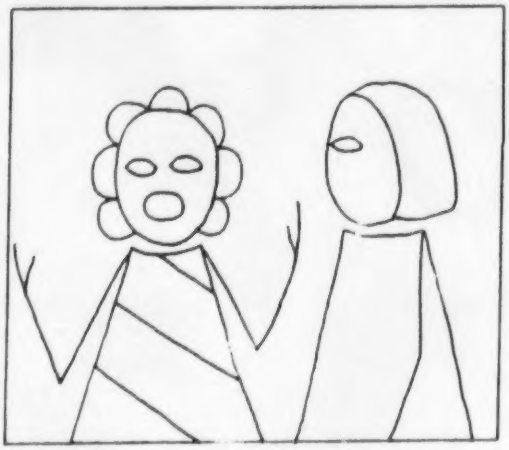
Barbie and her friend are playing in the park.

Bárbara y su amiga están jugando en el parque.



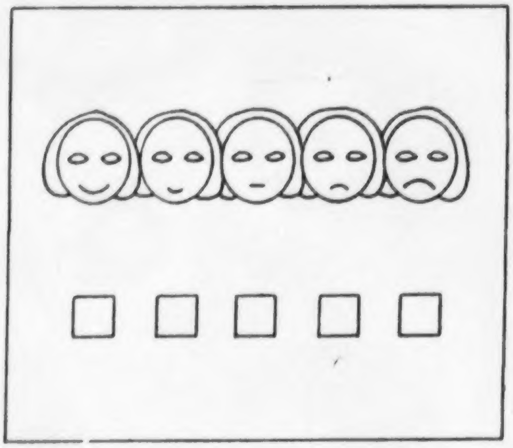
A woman is sitting on a park bench.

Una señora está sentada en el parque.



Barbie says, "She's looking at us."

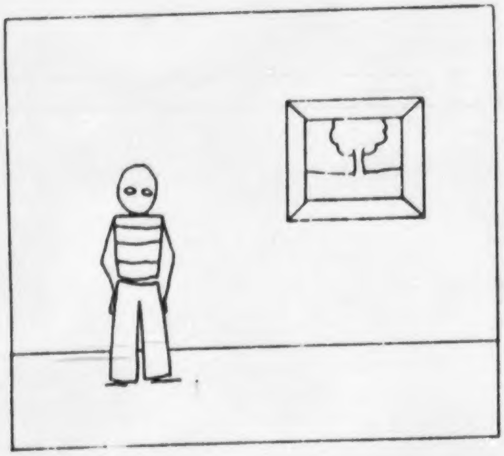
Bárbara dice, "Nos está mirando."



Which one is the woman's face?

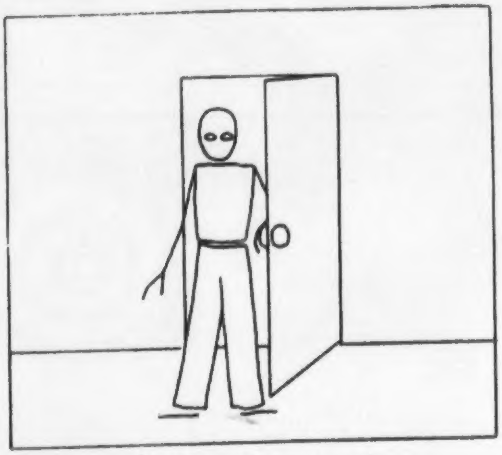
¿Qué cara tiene la señora?

H-36



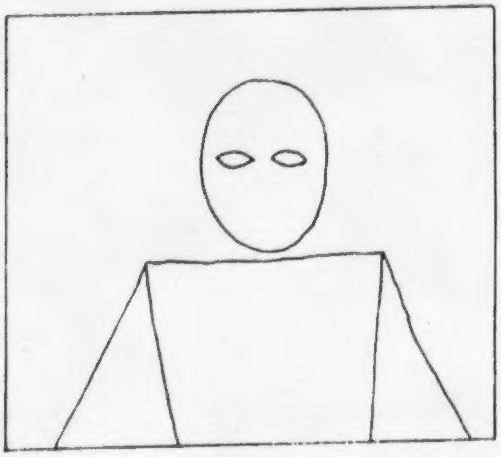
Fred is home.

Alfredo está en la casa.



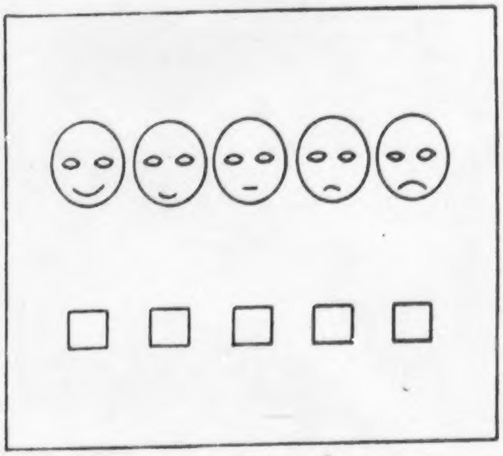
Dad comes home from work.

Su papá llega del trabajo.



He looks at Fred

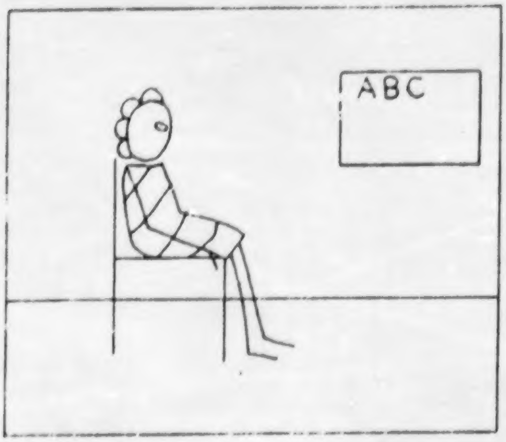
Mira a Alfredo.



Which one is Fred's face?

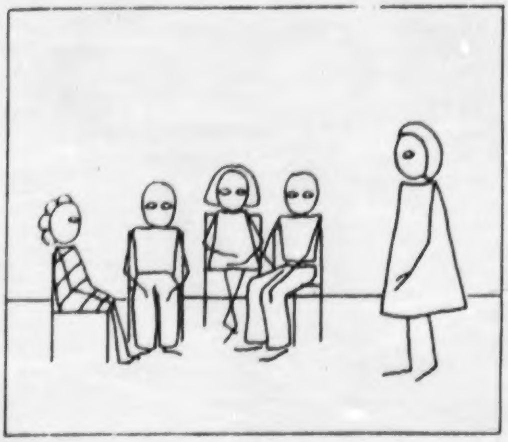
¿Qué cara tiene Alfredo?

S-37



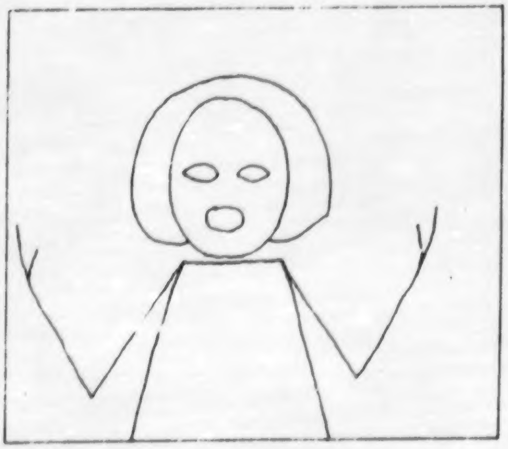
Mary is in school

Yolanda está en la escuela.



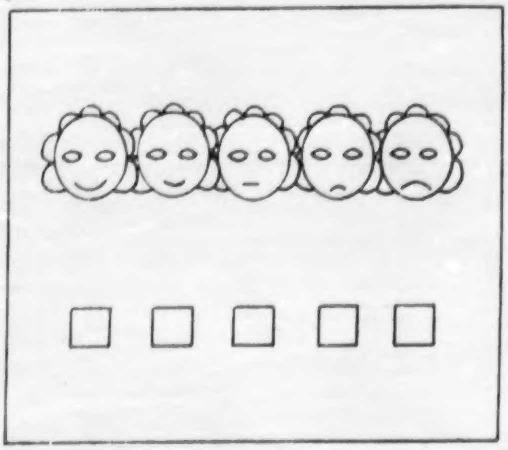
The teacher is talking to the class.

La maestra está hablando con la clase.



The teacher says," We will have fun today and work hard too"

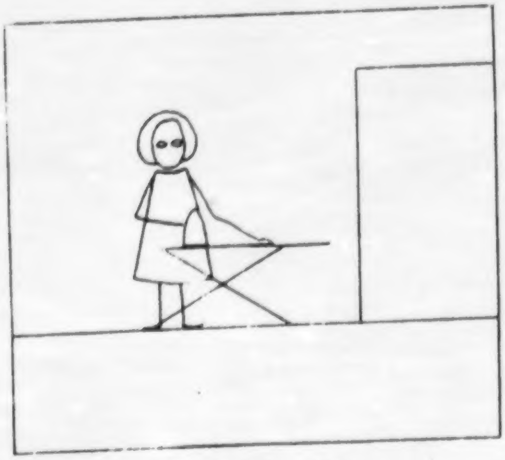
La maestra dice. "Hoy vamos a pasar buen tiempo y a trabajar duro tambien.



Which face is Mary's?

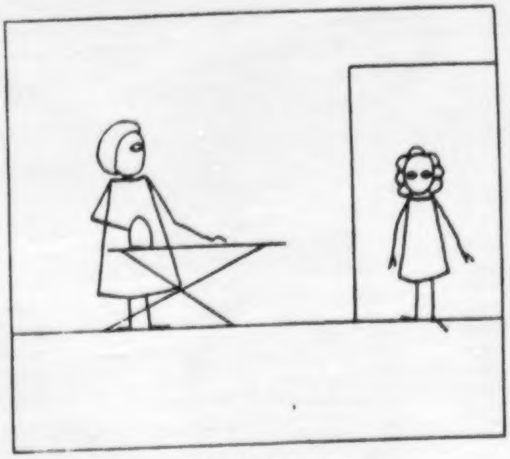
¿Que cara tiene Yolanda?

H-38



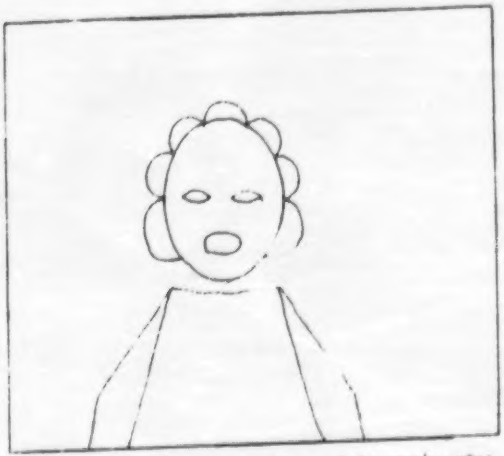
Donna's mother is ironing

La mamá de Diana está planchando.



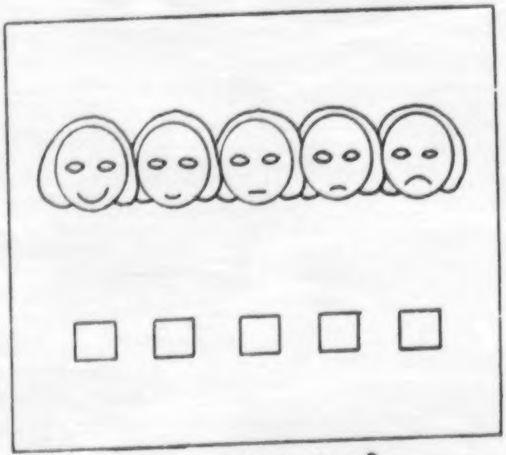
Donna comes into the room.

Diana llega al cuarto.



Donna says, "Mother, I want to ask you a question"

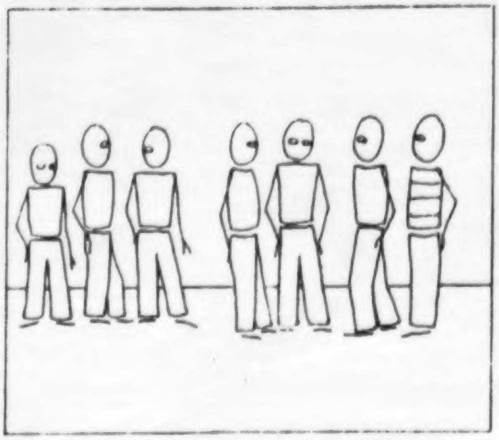
Diana dice, "Mamá, quiero hacerte una pregunta."



Which one is mother's face?

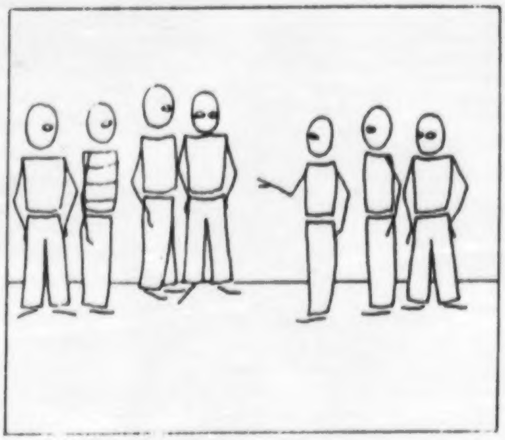
¿Qué cara tiene la mamá?

P-39



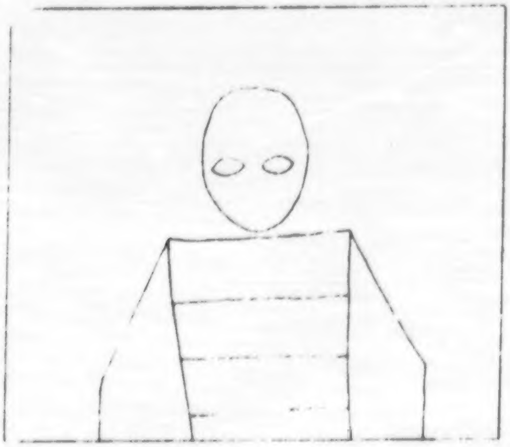
Some boys begin to play a game

Unos muchachos empiezan a jugar.



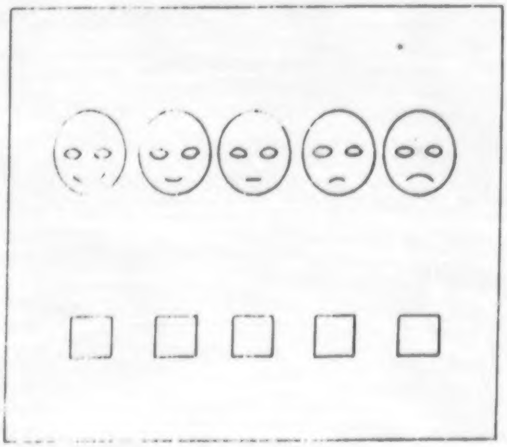
They are choosing sides.

Se dividen en grupos.



Tim has not been chosen yet.

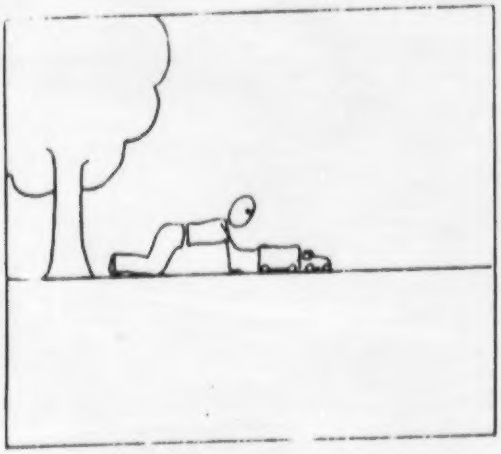
A Tomás no lo han escogido todavia.



Which one is Tim's face?

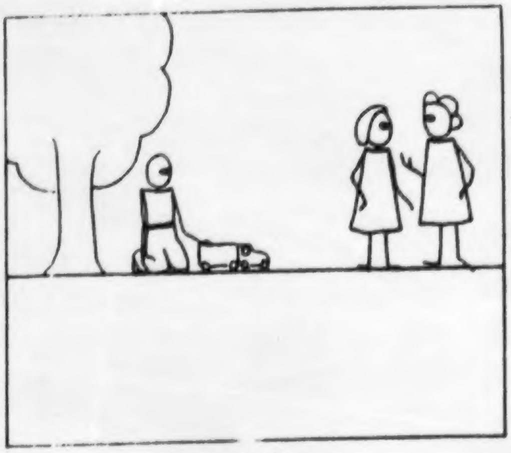
¿Qué cara tiene Tomás?

C-40



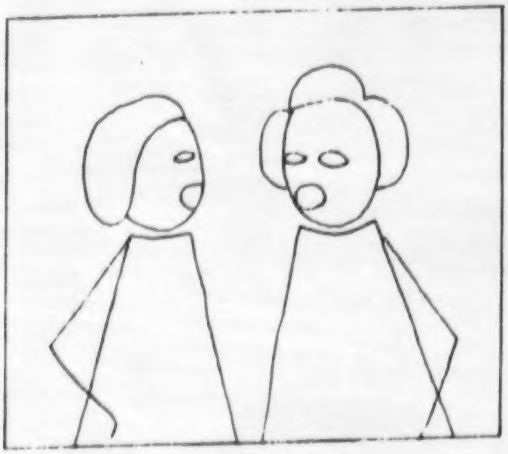
Ken is outside.

Jorge está afuera.



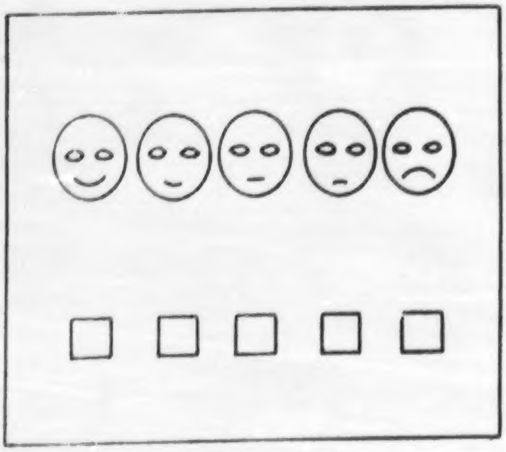
He sees some neighbors.

Ve unas vecinas.



They are talking about kids.

Estan hablando de ninos.



Which one is Ken's face?

¿Que cara tiene Jorge?

APPENDIX B:

Tentative Summary Stanine Chart for PSAS Subtests and Total Scores

Stanine	Score Range				
	Total	Peer	School	Home	Community
1	41-103	11-23	11-22	11-23	11-22
2	104-115	24-28	23-27	24-26	23-25
3	116-124	29-32	28-30	27-30	26-29
4	125-135	33-35	31-33	31-33	30-33
5	136-146	36-38	34-37	34-36	34-35
6	147-157	39-41	38-40	37-39	36-39
7	158-167	42-44	41-43	40-42	40-42
8	168-178	45-46	44-46	43-45	43-45
9	179-199	47-49	47-49	46-49	46-49